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GEORGE MANIERRE

Secretary of the Museum Corporation from April, 1894, to May, 1907, and  
Chairman of the Auditing Committee since the organization.



FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 173.

REPORT SERIES.

VOL. IV, No. 4.

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ANNUAL REPORT OF THE  
DIRECTOR

TO THE

BOARD OF TRUSTEES

FOR THE YEAR 1913.



CHICAGO, U. S. A

January, 1914.



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# ANNUAL REPORT OF THE DIRECTOR.

1913

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To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1913.

A review of the year's activities, while not without the broader and more striking interest of expedition research and survey in various parts of the world, shows that the labor performed, the material progress made, has been very largely within the walls of the Institution in continuance and enlargement of the plans of the past two years in preparing exhibition material for the New Building. This work not only includes the installation of material that has not been on exhibition but the re-installation of exhibited material and the re-labeling of the latter. So well have the different departments devoted their energies to this task that the orderly and systematic physical appearance of the Museum has ceased to elicit commendation from visitors or contemporaries. The great number of installed new cases for which space is continually demanded from the already crowded floor area has interlocked the installation of departments and divisions to a degree that must be confusing to visitors, as it certainly is most unsatisfactory to the management. If the pressure for space continues, as it seems likely it will do, some portions of the Museum must be closed off as an improvised warehouse where cases can be stored without any relation to passage-ways or any regard for the convenience of visitors. In some of the courts and halls the circulation provisions have been reduced to two-feet passage-ways which really almost prohibits an inspection of the contents of the cases.

The Joseph N. Field Ethnological expedition to the South Sea Islands concluded its three years' studies and collections, and Dr. Lewis, the head of the expedition, has returned and for several months has been engaged in cataloguing, labeling and installing this most prized collection. It is now quite apparent that the great extent of this collection will not permit its complete installation for several years, though from its abundance a notable representation will be on view within the coming year. In addition to the fund provided by Mr. Joseph N. Field for the field work of this South Pacific expedition, a further and large sum was contributed by Mr. Field for the purchase of an important collection of

masks from New Britain and ethnological material from German New Guinea.

The South American Zoölogical expedition is still in the field, being last reported as in Southern Brazil with splendid results. The consignments of material from the field reach the Museum at intervals of about three months, and, as will be seen from the report on the Department of Zoölogy made elsewhere, is giving the greatest satisfaction to the department.

The Museum is the grateful beneficiary of the results from a private expedition to British East Africa and adjacent territories under Mr. Brent Altscheler of Louisville, Kentucky, a hunter, a lover of science, and a friend of the Museum.

The announcement of the Hon. R. M. Barnes of Lacon, Illinois, that he had constituted Field Museum of Natural History legatee under his will for his collection of more than 24,000 birds' eggs was received by the authorities of the Museum with the greatest satisfaction, for not only is this act regarded as a high testimonial to the worthiness of the Museum and an evidence of extending confidence in its purposes and performances, but it is of a great value to the Division of Ornithology to be assured that eventually this great collection will be added to its resources.

The progress made by the N. W. Harris Public School Extension during the year, and the interest that the public and the Chicago schools system have manifested in this exhibition of collections from the Museum in the public schools, have encouraged the founder in this philanthropy, and inspired with zeal the organization which is dispensing it. The preliminary stages in the difficult task of getting this undertaking in full operation have been passed; the experimental period is practically over, and when a few details, yet to be arranged with the Superintendent of Schools have been determined upon, the regular distribution of these cabinets will be begun. The force of scientific men and preparators under the guidance of the efficient curator of this foundation have a great many cabinets and cases completed, and recently, at the request of the Council for Library and Museum Extension, made an exhibition of a number of the collections at the Art Institute, which was very well attended and very cordially commended.

**MAINTENANCE.**— The cost of maintenance for the year amounted to \$170,000, which was \$5,000 less than the amount authorized by the Board of Trustees for the year ending December 31, 1913. The total amount expended for all purposes was \$237,100, being \$1,000 less than the previous year. The difference between the cost of maintenance and the actual amount expended is accounted for by special appropriations for the purchase of collections, and the cost of extensive repairs to

the roof of the building. The building itself can be considered as being in good repair, yet the overhanging cornices which are rapidly deteriorating occasion a certain amount of anxiety and are promptly removed as conditions demand. During the year the entire building was thoroughly examined by an expert assigned for this inspection by D. H. Burnham & Company, the architects. The report states that all brick work is in first class shape, as is also the structural steel in the columns and girders. The staff work throughout the interior of the building was found to be in good condition. The skylights were also reported as being in good state. A special request was made that this expert examine the floor loads throughout the building, and it is gratifying that the report states that much care had been exercised in this respect and where an unusually heavy load is concentrated the floor had been thoroughly reinforced in each instance.

LECTURE COURSES.—The lecture courses have been particularly interesting and well attended. They have been participated in by distinguished scholars and students in the various branches of the natural sciences, and acknowledgment is here made of the generosity and good will which this participation manifests toward the Museum.

Thirty-eighth free illustrated lecture course, delivered during the months of March and April, 1913.

March 1.—“A Look into South America.”

Prof. Rollin D. Salisbury, The University of Chicago.

March 8.—“Fossil Collecting.”

Mr. A. W. Slocum, Assistant Curator, Division of Invertebrate Paleontology, Field Museum.

March 15.—“Cultural and Somatic Evidences of Man's Antiquity.”

Prof. George Grant MacCurdy, Yale University.

March 22.—“Spain — Country and People.”

Mr. Arthur Stanley Riggs, New York.

March 29.—“Newfoundland.”

Prof. M. L. Fernald, Harvard University.

April 5.—“Wild Flowers of the Chicago Region.”

Dr. C. F. Millspaugh, Curator, Department of Botany, Field Museum.

April 12.—“Crossing the Andes of Northern Peru.”

Mr. W. H. Osgood, Assistant Curator of Mammalogy and Ornithology, Field Museum.

April 19.—“Logging California Redwoods.”

Mr. Huron H. Smith, Assistant Curator, Division of Dendrology, Field Museum.

April 26.—“Religious and Artistic Thought in China.”

Dr. Berthold Laufer, Associate Curator of Asiatic Ethnology, Field Museum.

Thirty-ninth free illustrated lecture course, delivered during the months of October and November, 1913.

Oct. 4.—“Korea.”

Mr. Homer B. Hulbert, Springfield, Massachusetts.

Oct. 11.—“The Scenery and Resources of Alaska.”

Prof. Lawrence Martin, University of Wisconsin.

Oct. 18.—“The Physical Basis and Determination of Sex.”

Dr. Horatio H. Newman, The University of Chicago.

Oct. 25.—“Our Forests.”

Mr. Huron H. Smith, Assistant Curator of Dendrology, Field Museum.

Nov. 1.—“Zoölogical Collecting in South America.”

Mr. Wilfred H. Osgood, Assistant Curator of Mammalogy and Ornithology, Field Museum.

Nov. 8.—“The Inhabitants of Fresh Water.”

Dr. Victor E. Shelford, The University of Chicago.

Nov. 15.—“Migration of Plants.”

Prof. L. H. Pammel, Iowa State College.

Nov. 22.—“The Joseph N. Field South Pacific Expedition.”

Dr. A. B. Lewis, Assistant Curator of African and Melanesian Ethnology, Field Museum.

Nov. 29.—“New Zealand.”

Dr. Carlos E. Cummings, Buffalo Society of Natural Sciences.

PUBLICATIONS.—The publications of the Museum have appeared as usual from time to time as opportunity presented itself. The list includes eight numbers of the established series, details of which follow:

Pub. 165.—Report Series, Vol. IV, No. 3. Annual Report of the Director to the Board of Trustees for the year 1912. 90 pages, 14 half-tones. Edition 2500.

Pub. 166.—Zoölogical Series, Vol. X, No. 8. New Species of Fishes from Panama. By S. E. Meek and S. F. Hildebrand. 15 pages. Edition 1500.

Pub. 167.—Ornithological Series, Vol. I, No. 7. Descriptions of Twenty-eight New Species and Subspecies of Neotropical Birds. By C. B. Cory. 10 pages. Edition 1500.

Pub. 168.—Zoological Series, Vol. X, No. 9. New Peruvian Mammals. By W. H. Osgood. 9 pages. Edition 1500.

- Pub. 169.— Anthropological Series, Vol. XIII, No. 1. Notes on Turquois in the East. By Berthold Laufer. 72 pages, 1 colored plate, 7 halftones. Edition 2000.
- Pub. 170.— Anthropological Series, Vol. XII, No. 2. The Wild Tribes of Davao District, Mindanao. By F. C. Cole. 153 pages, 1 colored map, 75 halftones, 62 zinc etchings. Edition 1500.
- Pub. 171.— Geological Series, Vol. IV, No. 3. New Trilobites from the Maquoketa Beds of Fayette County, Iowa. By A. W. Slocom. 41 pages, 6 halftones, 1 zinc etching. Edition 1500.
- Pub. 172.— Botanical Series, Vol. II, No. 9. I. The Genera *Pedilanthus* and *Cubanthus* and other American Euphorbiaceæ. By C. F. Millspaugh. II. Two New Stonecrops from Guatemala. By Raymond Hamet. 27 pages. Edition 1500.

## NAMES ON MAILING LIST

Domestic . . . . .	614
Foreign . . . . .	693
	<u>1,307</u>

## DISTRIBUTION OF FOREIGN EXCHANGES

Argentine Republic . . . . .	12	India . . . . .	13
Australia . . . . .	29	Italy . . . . .	35
Austria-Hungary . . . . .	31	Jamaica . . . . .	2
Belgium . . . . .	17	Japan . . . . .	9
Borneo . . . . .	1	Java . . . . .	4
Brazil . . . . .	9	Liberia . . . . .	1
British East Africa . . . . .	2	Malta . . . . .	1
British Guiana . . . . .	2	Mexico . . . . .	20
Bulgaria . . . . .	1	Natal . . . . .	3
Canada . . . . .	29	Netherlands . . . . .	21
Cape Colony . . . . .	6	New Zealand . . . . .	7
Ceylon . . . . .	3	Norway . . . . .	8
Chile . . . . .	2	Peru . . . . .	2
China . . . . .	2	Portugal . . . . .	5
Colombia . . . . .	2	Rhodesia . . . . .	2
Costa Rica . . . . .	4	Roumania . . . . .	1
Denmark . . . . .	9	Russia . . . . .	16
East Africa . . . . .	1	Salvador . . . . .	1
Ecuador . . . . .	1	Sicily . . . . .	3
Egypt . . . . .	2	Spain . . . . .	7
France . . . . .	55	Straits Settlements . . . . .	1
Fiji Islands . . . . .	1	Sweden . . . . .	15
Finland . . . . .	2	Switzerland . . . . .	23
Germany . . . . .	138	Tasmania . . . . .	3
Great Britain . . . . .	119	Transvaal . . . . .	3
Greece . . . . .	2	Uruguay . . . . .	1
Guatemala . . . . .	1	West Indies . . . . .	3

## DISTRIBUTION OF PUBLICATIONS (FOREIGN)

Anthropological . . . . .	308	Ichthyological . . . . .	165
Botanical . . . . .	366	Ornithological . . . . .	205
Entomological . . . . .	162	Report . . . . .	693
Geological . . . . .	357	Zoological . . . . .	298

## DISTRIBUTION OF DOMESTIC EXCHANGES

Alabama . . . . .	2	New Jersey . . . . .	14
Arkansas . . . . .	1	New Mexico . . . . .	2
California . . . . .	28	New York . . . . .	84
Colorado . . . . .	11	North Carolina . . . . .	6
Connecticut . . . . .	21	North Dakota . . . . .	2
Delaware . . . . .	2	Ohio . . . . .	22
District of Columbia . . . . .	65	Oklahoma . . . . .	2
Florida . . . . .	2	Oregon . . . . .	1
Idaho . . . . .	1	Pennsylvania . . . . .	35
Illinois . . . . .	71	Rhode Island . . . . .	5
Indiana . . . . .	16	South Carolina . . . . .	2
Iowa . . . . .	15	South Dakota . . . . .	2
Kansas . . . . .	6	Tennessee . . . . .	2
Kentucky . . . . .	3	Texas . . . . .	2
Louisiana . . . . .	4	Utah . . . . .	1
Maine . . . . .	7	Vermont . . . . .	4
Maryland . . . . .	9	Virginia . . . . .	4
Massachusetts . . . . .	65	Washington . . . . .	6
Michigan . . . . .	12	West Virginia . . . . .	6
Minnesota . . . . .	9	Wisconsin . . . . .	17
Mississippi . . . . .	3	Wyoming . . . . .	2
Missouri . . . . .	12	Cuba . . . . .	3
Montana . . . . .	2	Hawaii . . . . .	5
Nebraska . . . . .	7	Philippine Islands . . . . .	3
Nevada . . . . .	3	Porto Rico . . . . .	1
New Hampshire . . . . .	4		

## DISTRIBUTION OF PUBLICATIONS (DOMESTIC)

Anthropological . . . . .	230	Ichthyological . . . . .	150
Botanical . . . . .	300	Ornithological . . . . .	158
Geological . . . . .	311	Report . . . . .	614
Historical . . . . .	159	Zoological . . . . .	263

THE LIBRARY.—The accessions to the Library during the year numbered 4,003, an increase over last year of 1,737. Of these additions 3,908 were received by gift or exchange and 95 by purchase. The volumes and pamphlets in the Library are credited to the different Departments, as follows:

General Library . . . . .	41,102
Department of Anthropology . . . . .	3,008
Department of Botany . . . . .	6,444
Department of Geology . . . . .	8,751
Department of Zoology . . . . .	<u>2,931</u>
Total . . . . .	662,23





GROUP OF TROPICAL AMERICAN FISHES.

GROUP OF TROPICAL AMERICAN FISHES.

TIGER SHARK (*Galeocerdo tigrinus*) WITH 38 YOUNG.



Publications were received from 808 individuals and institutions. A special effort was made to increase the useful collections of separata. Requests for reciprocation with equivalent literature were made to all authors who are receiving the publications of the Museum, and who had not done so hitherto. The response to date is gratifying, some four hundred titles having been received. The securing of these additions, the effecting of new exchanges, the obtaining of missing parts to fill in or to complete sets, involved the writing of approximately 1,000 letters. From the translators and commentators, Mr. and Mrs. Herbert Clark Hoover, London and New York City, was received a copy of Georgius Agricola De Re Metallica, translated from the first Latin edition of 1556, with biographical introduction, annotations, etc. With copies of the original editions of 1621 and 1657 in the library, this gift of an accurate translation of this classic in mineralogical literature is highly prized. The library was also the recipient of a copy of the second volume of the J. Pierpont Morgan Catalogue of Porcelains. Other gifts of value received were from Mr. G. R. Agassiz, Cambridge, Mass.; Mr. William D. Boyce of Chicago; Mr. Arthur De Selm, Kankakee, Illinois; Mr. Martin A. Ryerson, Chicago; Mr. William Schaus, Washington, D. C.; Mr. Charles D. Walcott, Washington, D. C.; Imperial Botanical Gardens, St. Petersburg, Russia; Japan Society, London, England; Royal Academy of Science, Vienna, Austria; École des Langues Orientales Vivantes, Paris, France; The Natural History Museum of Hamburg, Germany; the Natural History Society of Hannover, Germany; U. S. Department of Commerce and Labor; the Smithsonian Institution and Yale University Library, New Haven. A notable accession of the year was the literature received with the collection of Ward-Coonley meteorites. The late Mr. Ward had collected over three thousand titles, 1,250 new to this Library, covering the years 1620-1906. This addition to the literature already on the Museum shelves places this library in the front rank on this particular subject. Among the most important purchases were: Le Coq, Chotscho; Gorer & Blacker, Chinese porcelain and hard stones; Dufour, Le Bayon d'Angkor Thom bas-reliefs; Brabourne & Chubb, Birds of South America; Giebel & Liche, Mammalia, 1874-1913; Martius & Spix, Reise in Brasilien, 1817-20.

The books, periodicals and pamphlets bound during the year number 1,021. The proper sequence of the accessions has had to be sacrificed to make more readily accessible the books most in demand. Two cases discarded for installation purposes by the Departments were fitted with shelves and placed in the General Reading Room and filled with works of a general character. All duplicate material has been packed

in boxes. There have been written and inserted in the various catalogues 22,570 cards.

DEPARTMENTAL CATALOGUING, INVENTORING AND LABELING. — In no previous year in the history of the Department of Anthropology have so many cases been installed with their full complement of labels. At least 150 cases have been fully labeled. It is confidently believed that no more adequate labeling could have been accomplished than that which now prevails throughout the Chinese and Philippine collections recently installed. For the Chinese collection alone over 2,600 labels have been printed. There have been entered in the inventory books of the Department nearly 3,000 catalogue cards, which were about equally divided between the Blackstone Chinese Collection and the Field South Pacific Islands Collection. The Chinese archæological collection has been completely catalogued and the cataloguing of the Tibetan material is well advanced. Assistant Curator Lewis has written approximately 3,000 catalogue cards of the South Pacific Islands collections, which are ready to be entered in the inventory books. These have not yet been turned over to the Cataloguer, but are retained for further reference in connection with the installation of the material which they chronicle.

The cataloguing of the specimens of all accessions received during the year in the Department of Botany is complete to date, and 31,624 sheets of the larger accessions of previous years have also been catalogued. All new installations have received their labels so far as they have been secured from the printer. Copy has been written for 1,033 labels, of which 290 are still in the hands of the printer.

The principal work of cataloguing performed in the Department of Geology was that of the Ward-Coonley meteorite collection. All of this collection to the number of 1,661 specimens has been carefully catalogued. All other material received during the year has likewise been fully catalogued. The material so catalogued includes 784 economic specimens, 1,034 of minerals and about 400 of fossils. For the card catalogue of vertebrate paleontology 72 descriptive cards were written. Books to the number of 282 and 1,355 pamphlets were added to the Department library during the year, and 1,004 cards were added to the card catalogue of the library, making a total of 3,618 cards now comprising the Departmental library catalogue. To the Department photographic albums 185 prints have been added since the last report, making a total of 2,685 photographs now contained in these albums. All of these photographs are fully labeled. The preparation of labels for the exhibition series during the year has principally been concerned with replacing labels of the old buff cardboard type by those of current type. In connection with this work constant revision of the labels has been

carried on and any improvements deemed desirable in the text or style of labels have been made. Series which have been labeled in this way in full during the year include the asbestos collection, the collections of Lake Superior and Manhattan Island rocks, ores of copper, zinc, iron and many minor metals, the collections of concretions, stalactites, rock textures, etc., the glaciated slabs and other specimens in Alcove 103 and the soda collection. Many of these collections contain descriptive labels which were rewritten in order that the information given might be as fresh and up-to-date as possible, or improved in form. For this purpose or for newly installed material 65 descriptive labels were written during the year. Newly installed material was provided with labels as fast as received during the year and practically all specimens now on exhibition are provided with labels of the latest Museum pattern. New series labeled during the year include the graphite collection, several series illustrating uses of metals, a series of Patagonian fossils, of miscellaneous fossil mammals and a large number of invertebrate fossils. The series of blast furnace models, Hall 34, was also supplied with fully descriptive labels. The total number of labels prepared during the year was 3,215, of which 2,902 were printed and installed.

The Curator of Zoölogy reports that cataloguing has proceeded in this Department as usual and all accessions received during the year have been properly entered. In the classified card catalogue much progress has been made both in Ornithology and Mammalogy. Catalogue cards to the number of 350 have been written for mammals which represent more than 1,000 entries. For birds 400 cards have been written and 22 distribution maps have been labeled, the former numbering 1,200 entries. The card check list of the specimens of South American mammals has been increased to approximately 800 cards. New labels were provided for the serial collection of exotic birds. The Costa Rican collection of fishes obtained by Assistant Curator Meek has been partially catalogued.

The year's work in the Museum on catalogues and inventories is shown in detail below:

	No. of Record Books	Total No. of Entries to Dec. 31, 1913	Entries During 1913	Total No. of Cards Written
Department of Anthropology . . . .	36	126,530	3,000	130,781
Department of Botany . . . . .	57	404,965	41,781	40,711
Department of Geology . . . . .	21	128,036	4,020	7,659
Department of Zoölogy . . . . .	40	91,905	2,975	30,034
The Library . . . . .	14	95,865	1,054	164,692
Section of Photography . . . . .	10	107,268	5,714	.....

ACCESSIONS.—The most important accessions of the year in the Department of Anthropology were those resulting from the Joseph N.



Field Expedition to the South Pacific. These not only include the material collected by Dr. Lewis, but several thousand specimens selected and purchased by the Curator from a dealer in Hamburg. As a result of the expedition and the purchase mentioned, the Department now possesses one of the most important and extensive collections of South Pacific ethnology. It is not possible at this time to state accurately the total number of specimens, but it is believed that it will exceed 20,000. The large number of specimens from most of the islands of Melanesia makes the collection of supreme importance. The collection from the Admiralty Islands is probably unique, for it not only comprises a series of fine carvings and a large series of specimens illustrating all phases of ordinary material culture of the islanders, but more than 30 carved beds, 20 huge carved drums, and 60 great bowls with highly decorated handles. From the Baining Mountains, New Britain, are no less than 11 ceremonial masks, unmatched in character. The series of prepared skulls from New Hebrides runs into the hundreds; of prepared skulls from New Guinea there are more than a thousand. Collections from the Kaiserin Augusta region of German New Guinea are especially rich and beautiful, comprising among other examples 4 feather masks 15 feet in height. The series of carved drums and house ornaments from New Caledonia adds to the effectiveness of an already rich collection from this interesting island. While the bulk of material acquired during the year must be credited to Mr. Field, yet the Department has made other important accessions. An especially notable acquisition is that of 157 ancient and wonderful bone carvings of intrinsic interest, assembled in China by that distinguished Chinese scholar and missionary Mr. F. H. Chalfant of Pittsburgh, Pennsylvania. It is Dr. Laufer's opinion that these objects rank among the most ancient relics known of Chinese antiquity and that they were originally used for purposes of divination. The oracles and decisions given in reply to them by the seers are carved into the surface of the bone and present the oldest form of Chinese writing now extant; hence their remarkable interest. Among the carvings represented are alligators of a surprisingly realistic form, dragons, tortoises, snakes, and replicas of weapons, bells, and implements; again there are imitations of shell money and specimens of ancient cowry-shells actually used in lieu of money. Somewhat similar collections are to be found in the museums of Pittsburgh, Edinburgh, London, and Berlin, but according to Mr. Chalfant this institution has secured the finest and most valuable series ever taken from China. This interesting and valuable acquisition was made possible through the generosity of Mrs. T. B. Blackstone. To the generosity of Prince Damrong, brother of the late King of Siam, the Museum is indebted for the





PARADE UNIFORM, FRONT AND BACK, OF OFFICER IN ATTENDANCE ON THE EMPEROR IN THE PALACE, PEKING, CHINA (XVIII<sup>TH</sup> CENTURY).



gift of four Buddhist votive offerings of clay stamped with Buddhist subjects, excavated on the site of an ancient temple in Trang province, Siam. These objects are of great value inasmuch as the Museum possesses similar specimens from China and Tibet. In connection with this gift the Museum is indebted to Dr. C. S. Braddock of New York, through whose mediation the tablets were forwarded to the Museum. Mr. Gotfryd Anderson of Chicago and of the China Inland Mission presented to the Museum a Tibetan ink-drawing on yellow silk, mounted on Chinese brocade, representing Buddha surrounded by deities and saints. Of acquisitions made by purchase the two most important pertain to China. One is an excellent specimen of the parade uniform of an official in attendance at the imperial palace of Peking. It dates from the 18th century, and is in an unusually good state of preservation. The uniform is of silk almost solidly embroidered with heavy gold thread which is in practically perfect condition. The steel helmet of the uniform bears chased dragons in gold and is decorated with inlaid kingfisher feathers and painted eagle pinions. The uniform is accompanied with bow case and quiver, and studded with gilt brass ornaments, and the chest in which the whole is packed when not in use. From the British Museum the Museum purchased a color-print reproduction of the famous painting attributed to Ku K'ai-chi. A copy of O. Franke's book on Agriculture and Sericulture in China was acquired to make use of the 91 plates for exhibition purposes. These embrace an interesting series of wood cuts executed in 1210, of which but one copy is thus far known, found by Dr. Laufer in a bookshop of Tokyo and now deposited in the John Crerar Library. The whole series of plates is shown on a screen, individual labels being printed on the mats, and affords a good idea of the various stages of farming and the processes of weaving.

The Curator of Botany reports important additions to the Herbarium of which the following may be noted: Arsene & Nicolas, Mexico 1159; Britton & Shafer, St. Thomas 125, St. Jan 71; W. E. Broadway, Tobago 227; Brumback & Davies (Misses), Colorado 222; W. P. Carr, South Dakota 101; Clemens Mrs., Montana 51, Utah 50; Dr. Dalziel, Nigeria 59; Judge DeSelm, Illinois 775, Michigan 68; A. D. E. Elmer, Philippines 1000; Padre Fuertes, San Domingo 658; Wm. Harris, Jamaica 420; J. H. Hart, Jamaica 94; Dr. Haydon, Oregon 128; A. A. Heller, Nevada 196; Hungarian Natl. Museum, Hungary 109; Frank W. Johnson, Indiana 52; C. F. Millsbaugh, Wisconsin 65, Illinois 56; John Macoun, Vancouver Isl. 74; C. A. Purpus, Mexico 359; J. A. Shafer, Cuba 198; Shafer & Leon, Cuba 53; H. H. Smith, Indiana 69, Illinois 108, California 681, Sta. Catalina Isl. 150; Tilden, Josephine, New

South Wales 77, Victoria 399, Tahiti 94; S. S. Visser, South Dakota 663; Vanoverburgh, Philippines 507.

Status of the organization of larger Herbaria purchases:

Herbarium	Organized 1913.	Completely organized.
Bebb, M. S. . . . .	.....	31,583
Chicago University . . . . .	10,361	44,048
Heller, A. A. . . . .	.....	.....
Hitchcock, A. S. (Fla.) . . . . .	.....	7,078
Millspaugh, C. F. . . . .	.....	5,002
Patterson, H. A. . . . .	.....	37,887
Rothrock, J. T. . . . .	.....	22,809
Schott, Dr. A. . . . .	.....	8,428
Shuette, J. H. . . . .	10,990	10,990
Small, J. K. . . . .	10,273	19,381
Wahlstedt, L. J. . . . .	.....	17,555

The additions to the organized Herbarium are shown in the following geographically arranged table:

	Added to Herbarium 1913.	Total now in Herbarium.
NORTH AMERICA (in general) . . . . .	9	140
Alaska (in general) . . . . .	23	553
Mary's Island . . . . .	1	1
Unalaska Island . . . . .	1	32
Canada (in general) . . . . .	13	2,015
British Columbia . . . . .	32	1,012
Labrador . . . . .	11	178
Kurnavik Island . . . . .	3	3
Manitoba . . . . .	1	259
New Brunswick . . . . .	28	780
Nova Scotia . . . . .	46	194
Ontario . . . . .	49	624
Pr. Edward Island . . . . .	2	11
Quebec . . . . .	24	145
Queen Charlotte Island . . . . .	6	6
Saskatchewan . . . . .	1	363
Vancouver Island . . . . .	130	361
Yukon . . . . .	1	69
Newfoundland . . . . .	4	716
Greenland . . . . .	39	203
Disco Island . . . . .	4	43
United States . . . . .		
Alabama . . . . .	285	1,333
Arizona . . . . .	79	9,442
Arkansas . . . . .	142	417
California . . . . .	1,895	23,854
Santa Catalina Island . . . . .	159	184
Colorado . . . . .	863	11,781

## NORTH AMERICA (in general)

## United States

Added to  
Herbarium  
1913.Total  
now in  
Herbarium.

Connecticut . . . . .	222	541
Dakota . . . . .	3	38
North Dakota . . . . .	300	701
South Dakota . . . . .	935	1042
Delaware . . . . .	125	1,588
District of Columbia . . . . .	385	2,352
Florida . . . . .	778	20,693
Georgia . . . . .	105	4,554
Idaho . . . . .	362	3,244
Illinois . . . . .	1,831	20,640
Indiana . . . . .	649	5,863
Indian Territory . . . . .	27	281
Iowa . . . . .	303	1,761
Kansas . . . . .	127	499
Kentucky . . . . .	269	1,204
Louisiana . . . . .	47	1,282
Maine . . . . .	61	1,613
Maryland . . . . .	127	1,079
Massachusetts . . . . .	216	3,122
Mexican Boundary . . . . .	3	1,355
Michigan . . . . .	501	3,931
Minnesota . . . . .	698	1,598
Mississippi . . . . .	69	2,031
Missouri . . . . .	525	3,015
Montana . . . . .	520	4,026
Nebraska . . . . .	173	413
Nevada . . . . .	264	1,011
New Hampshire . . . . .	123	1,481
New Jersey . . . . .	590	2,013
New Mexico . . . . .	281	2,953
New York . . . . .	626	6,046
North Carolina . . . . .	2,063	4,557
Ohio . . . . .	134	1,670
Oklahoma . . . . .	105	287
Oregon . . . . .	334	7,858
Pennsylvania . . . . .	1,586	10,845
Rhode Island . . . . .	48	592
Rocky Mountains . . . . .	13	1,391
South Carolina . . . . .	268	1,015
Tennessee . . . . .	226	1,452
Texas . . . . .	977	9,708
Utah . . . . .	250	2,948
Vermont . . . . .	114	2,660
Virginia . . . . .	2,356	4,673
Washington (State) . . . . .	92	6,340
West Virginia . . . . .	31	1,840
Wisconsin . . . . .	6,908	8,088
Wyoming . . . . .	75	929
Yellowstone National Park . . . . .	35	435

	Added to Herbarium 1913.	Total now in Herbarium.
CENTRAL AMERICA:		
Mexico (in general)	1,859	34,269
Lower California	85	1,811
Cedros Island	1	165
Yucatan	19	4,690
Costa Rica	17	552
Guatemala	26	2,881
Honduras	1	341
Nicaragua	3	88
San Salvador	2	23
WEST INDIES:		
Anáгада	23	23
Antigua	1	13
Bermuda	6	650
Cuba	344	9,767
Isle of Pines	1	654
Jamaica	522	7,080
Porto Rico	8	4,000
Saint Kitts	2	12
San Jan	71	76
Little San Jan	7	7
Saint Thomas	175	620
Buck Island	3	3
Santo Domingo	666	1,378
Tobago	204	513
Tortola	32	32
Trinidad	13	478
Virgin Gorda	5	5
SOUTH AMERICA (in general)		
Brazil	113	510
British Guiana	1	71
Chile	3	252
Colombia	3	2,423
Ecuador	15	849
Juan Fernandez	3	3
Magellan	2	40
Peru	31	90
Venezuela	2	1,063
Bonaire Island	2	2
Curacao Island	27	42
EUROPE (in general)		
Austria-Hungary	4	83
Bavaria	546	7,012
Belgium	2	2
Dalmatia	3	75
France	3	3
Germany	133	4,524
Great Britain:	231	7,098
England	116	679
Ireland	9	161

		Added to Herbarium 1913.	Total now in Herbarium.
EUROPE (in general)			
Great Britain			
Scotland . . . . .		22	493
Wight, Isle of . . . . .		3	34
Greece . . . . .		5	525
Italy . . . . .		106	2,491
Mediterranean Islands:			
Crete . . . . .		1	8
Malta . . . . .		2	7
Sardinia . . . . .		2	7
Sicily . . . . .		1	110
Norway . . . . .		3	219
Portugal . . . . .		2	11
Finland . . . . .		40	95
Scandinavia . . . . .		3	19
Spain . . . . .		4	139
Sweden . . . . .		324	823
Gotland Island . . . . .		5	203
Lapland . . . . .		24	231
Switzerland . . . . .		271	2,614
ASIA:			
Afghanistan . . . . .		1	2
Arabia . . . . .		13	17
Armenia . . . . .		1	175
Asia Minor (in general)			
Asiatic Turkey (in general)			
Anatolia . . . . .		2	2
Mesopotamia . . . . .		1	1
Syria . . . . .		3	75
China . . . . .		64	323
Mongolia . . . . .		1	1
East Indies . . . . .		3	3
Japan . . . . .		75	295
Formosa . . . . .		17	54
Java . . . . .		1	101
Malaya . . . . .		7	27
Persia . . . . .		2	21
Philippine Islands . . . . .		1167	5,648
Palawan . . . . .		1,000	1,000
Siam . . . . .		3	6
Siberia . . . . .		19	429
Turkestan . . . . .		3	92
AFRICA (in general)			
Abyssinia . . . . .		24	217
Algeria . . . . .		6	30
Angola . . . . .		1	11
Cape Colony . . . . .		14	81
Central Africa . . . . .		3	3
Congo . . . . .		1	1
Egypt . . . . .		1	23
Gold Coast . . . . .		1	1



	Added to Herbarium 1913.	Total now in Herbarium.
AFRICA (in general)		
Mauritius	1	9
Morocco	1	7
Mozambique	7	7
North Africa	63	205
Somaliland	4	4
South Africa	10	1,243
Uganda	4	4
Zanzibar	26	75
OCEANIA (in general)		
Australia (in general)	424	2,343
New South Wales	111	525
North Australia	10	15
Queensland	7	26
South Australia	1	1
Victoria	488	488
West Australia	10	42
Cooks Islands		
Raratonga	29	29
New Zealand	2	2,755
Samoa	40	103
Sandwich Islands	10	462
Tahiti	94	180
Tasmania	1	191
Timor	1	4
HORTICULTURAL	613	2,622
ILLUSTRATIONS, DRAWINGS, etc., mounted as herbarium sheets	58	1,012

The total increase of the organized herbarium during the year amounted to 41,401 specimens.

Several interesting and valuable accessions were received by the Department of Geology. Of especial interest were two gold nuggets obtained in the California gold fields in 1850, presented by Mr. William J. Chalmers; also a quantity of silver nuggets from Lake Superior. A fine series of lead minerals and mercury ores was presented by Christopher Murphy. Six slabs of standard museum size of Georgia marble illustrating different varieties of this marble were presented by the Georgia Marble Company; 13 slabs of Vermont marble, similarly prepared, were presented by the Vermont Marble Company; and three slabs of Canadian marble, likewise of standard size, by the Dominion Marble Company. A large mass weighing 400 pounds, of Versailles, Missouri, fire clay was presented by the W. S. Dickey Clay Manufacturing Company, and six varieties of pottery and other clays from various localities by the Land and Industrial Department of the Southern Railway. A series of 14 specimens illustrating a natural change of pyrite to hematite,



as seen at Copete, Mexico, presented by Francis C. Nicholas, was of much interest, as was also a series of 10 specimens illustrating the concentration of iron ores by washing, presented by the Oliver Mining Company. The Joseph Dixon Crucible Company presented an interesting series of 24 specimens illustrating uses of graphite, and the H. W. Johns-Manville Company 19 specimens illustrating the uses of asbestos. The Heath & Milligan Manufacturing Company presented 13 specimens of buhrstones and pigments. A series of 10 specimens of lead and silver ores from a new locality in California was presented by Dr. T. A. Dumont, and a large specimen of allanite used as an ore of rare earths, by A. C. Richards. A fine example of manufactured Monel metal was presented by the Biddle Hardware Company. About 1,000 specimens of varieties of agate and jasper from Oregon were presented by C. H. Marsh, and a series of about 50 ores and minerals, chiefly from Montana and illustrating ores of historic interest, was received from J. L. Rosenberger. Prof. R. D. Salisbury presented several specimens of obsidian nodules from Patagonia and some diamondiferous sand from Brazil, secured on his recent trip to South America. Through the kindness of Prof. Salisbury also 225 specimens of copper ores and concentrates were received from the Braden Copper Company, Rancagua, Chile. This suite was very complete in representing all phases of occurrence of the ore and many varieties of ore. By exchange with the University of California a valuable accession was received in a skeleton of *Canis diurus*, an extinct wolf from the asphalt beds near Los Angeles, California. By exchange with the United States National Museum a section of the Perryville meteorite was obtained and one of the Nakhla meteorite was obtained in a similar manner from the Egyptian Geological Survey. Specimens of the Tepl and St. Germain meteorites were also obtained by exchange, and some specimens of minerals, a trilobite, and a skull of the fossil camel *Stenomylus*, the latter from Amherst College. The most important purchase was that of the Davis Mountains, Texas, meteorite, which was obtained entire. The entire mass of the Pickens County, Georgia, meteorite was also purchased, a section of the St. Michel meteorite and an unusual specimen of pollucite from Maine.

The Department of Zoölogy received extensive accessions in all of its several divisions. The most important accessions of the year were those received from the Museum collectors in South America, which is shown by the fact that they contained 38 new species and subspecies; 28 of birds and 10 of mammals. These have been described in Museum publications and the types have materially added to the value of the collections. In addition to these a very valuable collection of hummingbirds, numbering 591 specimens and representing about 386 species and

subspecies, was obtained by purchase. This is a part of the great private collection of humming-birds belonging to the famous French naturalist, M. Adolph Boucard, and is especially important since many of the specimens are cotypes or paratypes of species described by him. Mention should also be made of a small but valuable collection of South American birds and mammals purchased from a dealer in Merida, Venezuela, containing 6 mammals and 235 bird skins, together with 42 humming-birds' nests and eggs, several species being very rare. Mr. John M. Studebaker of South Bend, Indiana, presented the Museum with a pair of American Elk, or Wapiti, which he killed a number of years ago in Colorado, and Mr. G. F. Steele of Chicago gave the Museum a number of mounted heads of Deer, Caribou, Goats, and one of the American Bison. A notable addition to the Osteological collection is the skeleton of *Cænolestes obscurus* from Columbia, which was mounted and installed and is the only known example on exhibition in any museum in the world. In the Division of Entomology an important addition was a collection of butterflies and moths from Key Islands. Among this lot were six specimens, three males and three females, of the magnificent butterfly *Troides priamus poseidon*. These will form a welcome addition to the exhibit series. Chiefly from expeditions, 649 fishes were added to the collections in the Division of Ichthyology and several hundreds through exchange, mention of which is elsewhere in this report.

EXPEDITIONS AND FIELD WORK. — The Assistant Curator of African and Melanesian Ethnology, Dr. A. B. Lewis, returned to resume his duties in the Museum last June, having completed his four years' pilgrimage in the South Pacific among the Melanesian Islands, in charge of the Joseph N. Field South Pacific Islands Expedition. The early months of the winter Dr. Lewis spent in Dutch New Guinea, traversing the north coast as far east as Humboldt's Bay. From this point he proceeded to Batavia, Java, where he spent two weeks packing up the collections and studying in the museum in that city. He returned to Europe via Singapore, Rangoon, and India, where he visited the chief museums and the chief centers of ethnologic interest. May was spent visiting the principal museums of Italy, Austria, Germany, Holland, and England. About 12,000 specimens were secured by this expedition. If to these are added the number of specimens secured by purchase and from the Curator's expedition into Melanesia, the total should approximate 20,000. Assistant Curator Owen returned to the Museum in May after a visit of several months among the Hopi Indians of Arizona. As a result of this expedition the Museum secured 50 boxes of additional specimens to be added to the already existing Hopi collection, all of

which work has been made possible through the generosity of Mr. Stanley McCormick. Mr. Owen was especially fortunate on this occasion in securing a large number of old specimens of a sacred nature which heretofore had not been attainable. The number of specimens exceed 800, including, for the first time, a complete set of all known gourd vessels used by the Hopi; a complete set of earthenware vessels used for household or ceremonial purposes; some 50 tihus or decorative wooden images, either decided variants from those already in the collection or entirely new to the collection; many fine old Katsina masks and headdresses; a complete series of objects illustrating the manufacture of shell beads; textiles, which include garments in the loom and every variety of weave known to the Hopi; complete sets of weaving implements; entire set of baskets and basket material from the Third Mesa; ceremonial paraphernalia, both for altars and costumes; raw materials, foodstuffs, etc. While in the Southwest the Assistant Curator secured identifications and additional information for about 50 tihus, some of which have been on exhibition in the Museum since its foundation. Many old masks were also identified and information obtained for their proper labeling. Over 150 photographs were made of winter ceremonials, especially of Katsina dances held only at that time of the year. Measurements and photographs were made of a typical Hopi spring, as well as of wooden figurines of certain Hopi divinities, both for purposes of reproduction in the Hopi Halls. Early in the year the Curator was granted a month's leave of absence to accept an invitation to deliver four lectures at Cambridge University, England. During this time he visited the museums of Hamburg and Berlin, and made a careful and exhaustive study of the East Indian Museum in London.

The material results of the work of the Assistant Curator of the Division of Dendrology of last season reached the Museum early in the year. The collections comprise many hundred photographic negatives of trees, tree growth, and forest conditions and operations; 215 tree trunks, "wheels," and boards; 80 dried fruits, seeds, and barks; 885 herbarium specimens and 2,275 duplicates for exchange purposes. During the present year the Dendrologist has spent his time in preparatory work in the Department, making two short field trips only in Indiana where he procured several tree specimens and photographs, 125 herbarium specimens, and 300 duplicates for exchange.

A journey made by the Curator of Geology to western Texas resulted in securing for the Museum an iron meteorite of a hitherto unknown fall. It is the largest individual specimen but one now in the Museum meteorite collection. The weight of this individual is 1,520 pounds. Besides its large size, it is of interest for its marked orientation

and for containing an appreciable quantity of platinum. The Assistant Curator of Paleontology secured by a trip to Grovertown, Indiana, a well preserved skull and nearly complete lower jaw of the extinct giant beaver, *Castoroides*. By using previously obtained remains of this species in connection with this skull it is probable that a mounted skeleton of this rare and interesting animal can be prepared. The Assistant Curator of Invertebrate Paleontology collected 182 specimens of invertebrate fossils at Little Traverse Bay, Michigan.

Field work in South America in the interest of the Department of Zoölogy was continued with excellent results. Through co-operation with a Brazilian government expedition in charge of Roderic Crandall, the collectors in the field, M. P. Anderson and R. H. Becker, were enabled to reach, and work at small expense, regions difficult of access; namely, the upper parts of the Rio Branco and the Mountains of the Moon near the boundary between Brazil and British Guiana. Important collections of birds and mammals were made and several fine examples of large mammals were obtained which will be used for habitat groups already planned. Mr. Anderson returned to the Museum in May, and Mr. Becker continued work in Brazil on the lower Amazon River and subsequently in the arid region of extreme eastern Brazil, in the Province of Ceara, whence he proceeded southward to Bahia and inland to the San Francisco River. The results of this work are mainly the acquisition of typical forms of vertebrate life, fresh material representing species many of which were described by early explorers and absolutely essential to any accurate knowledge of the fauna. Mr. Anderson, after a needed change in a northern climate, again entered the field, leaving here in October, commencing work in the little known Catatumbo region in northwestern Venezuela. An expedition to Alaska by Taxidermist Friesser proved highly successful. By permission of the Secretary of Agriculture, Mr. Friesser secured four selected specimens of the Alaskan Moose, the skins and skeletons being carefully prepared. Samples of vegetation, photographs, and all needed accessories for a striking group of these animals were obtained, as well as desirable specimens of birds and the smaller mammals, including Alaskan Porcupines, Squirrels, Ptarmigan, Owls, etc. Some local field work was done by the Curator of Zoölogy including a short trip to Vilas County, Wisconsin, where photographs for studies in group work, and migration notes to be used in maps illustrating the range of various species, were secured. In addition to the expeditions named above mention is made of the African expedition undertaken by Mr. Brent Altscheler of Louisville, Kentucky, in the interest of the Department of Zoölogy, to whose generosity in this particular reference is made elsewhere in this report.



The following is a list of the expeditions:

Locality	Collector	Material
Brazil . . . . .	R. L. Becker	Mammals and Birds.
Brazil, Peru and Venezuela . . . . .	M. P. Anderson	Mammals and Birds.
Monterey, California . . . . .	W. Heim	Fishes.
Baird, California . . . . .	W. Heim	Fishes.
Alaska, Seward Peninsula . . . . .	J. Friesser	Mammals.
Indiana . . . . .	H. H. Smith	North American Forestry.
Arizona . . . . .	C. L. Owen	Ethnological Material.
Melanesia . . . . .	A. B. Lewis	Ethnological Material.
Indiana . . . . .	E. S. Riggs	Vertebrate Fossils.
Michigan . . . . .	A. W. Slocum	Invertebrate Fossils.
Texas . . . . .	O. C. Farrington	Meteorites.
British East Africa . . . . .	B. Altscheler	Mammals and Birds.

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT.—The capacity of the staff and the assistants in the Department of Anthropology has been fully tested this year, for besides the routine work an extraordinary amount of new work has been performed. Over 150 new cases have been placed on permanent exhibition, practically all of them fully and completely labeled. In addition to these, 15 standard cases installed in recent years have been rearranged, for such rearrangement seemed necessary on account of the acquisition of new material. More than 250 boxes, many of them of huge dimensions, have been unpacked and the contents assorted into temporary storage cases. All of this has required an extensive rearrangement and readjustment, but the time has now come when there is practically no room, outside the three small halls still reserved for Chinese and Tibetan material, for the display of new material except at the expense of material already installed. Borneo collections were installed in 9 cases as follows: 4 Iban, 2 Malay, 1 Milanan, 2 Murut, 1 Kayan, and 1 Klemantan. These, together with 2 cases of Andaman Island material and one of Nicobar installed this year, and a case of Malay Peninsula material representing the primitive culture of the Semang and Sakai, have been placed in Hall 8 where they completely fill up the aisles and block the cases of prehistoric pottery from the Southwest. That hall now, though one of the most prominently placed halls in the Department, is merely a confused storage hall. Practically the entire Javanese collection has been reinstalled, which was necessary because most of it was installed in old and inadequate cases. This collection now occupies Hall 54. To provide adequate space in the East Annex for the completion of the Philippine collections and the rapidly expanding Chinese and Tibetan collections, other changes than those already noted were necessary. First, all the Melanesian material, except the large canoes suspended from the ceiling

and the large house posts attached to the wall, was removed from Hall 67 and transferred to the West Annex, where it is no longer available to the public. Again, the entire contents of Hall 66, consisting of a dozen cases devoted to Polynesia, Micronesia, and so on, were transferred to the West Annex. These collections also are no longer available to the public. But more serious was the enforced withdrawal from public exhibition of all the African collections, which now occupy a temporary resting place in a hall in the West Annex. While the Department has never maintained an expedition in Africa and while this African material has been acquired in an indirect and, consequently, more or less unsatisfactory manner, yet, from certain regions, the collections are of importance and have distinctive value, and they certainly deserve a better fate than to be placed in storage. The Philippine collections are now completely installed and occupy Halls 37, 38, 39, 40, 41, 42, 54, and 57. During the year 15 Philippine cases were reinstalled — a necessity because of the acquisition of new material — and the following cases were installed for the first time: 1 Batak, 1 Ilocano, 1 Mangyan, 9 Ilongot, 4 Ifugao, 1 Tingian, 1 Igorot, 1 Amburayan Igorot, 1 Guinnan, 6 Mandayan, 1 Bagobo, and 1 Pulunan. Besides, special cases have been prepared for certain spirit houses, planting sticks, and other objects requiring cases of special dimensions. A large group, to occupy a case 12 feet square, showing various phases of activity of the Bagobo represented by 7 figures modeled from life, is near completion and will soon be ready for installation. In the Northwest Coast Halls, 4 cases have been added—3 Salish and 1 Chilcotin—of material presented to the Museum by Mr. Homer E. Sargent. Besides these, 3 cases of Thompson River material were reinstalled. To the Southwest Section have been added 2 new cases of pottery from the Hopi pueblos, 1 case of Navaho masks, 2 cases of Apache costumes, a case of Colorado River baskets, and 3 cases of decorated pueblo shields and buffalo robes. The installation of this material has necessitated a certain amount of rearrangement in Halls 2, 3, and 7. Every case in the Gem Room containing ethnologic material has been subjected to a careful revision, classification, and labeling. In the Chinese Section installation has progressed in a satisfactory and efficient manner. There have been 69 new cases installed, besides three special exhibits requiring platforms or bases. The mediæval mortuary clay figures formerly shown on screens have been installed anew on shelves, and being now exposed in full light, their attractions can now be viewed and studied to best advantage. Five halls in the East Annex were fully installed which with Hall 44 are now devoted to East-Asiatic material. Hall 45 is mainly devoted to a display of the ceramic arts, 4 cases illustrating in historical development the most

prominent types of porcelain, three others containing faience, and three funeral images to which a marble sarcophagus and a glazed pottery coffin are joined. The other cases embrace miscellaneous material temporarily arranged; viz., coins, seals, and medals, Chinese and Tibetan silver jewelry, ancient bone carvings, and Buddhist votive offerings of clay. The object of the exhibits in the adjoining Hall 46 and 47 is to illustrate the religions of China—Confucianism, Taoism, Buddhism, and Islamism. Sixteen cases are now on view. Confucianism is illustrated by the most important portraits of Confucius and scenes in his life and career in examples chosen from the work of the best Chinese artists. The other religions are presented by a large number of paintings, rubbings, and statues of bronze, iron, and pottery. The principle of arrangement is simultaneously chronological and according to subject-matter. The important event of the year in matters of installation proved to be the placing on exhibition of the Chinese and Tibetan masks, and in view of complexity of the technical problem involved, due credit should be given to the Department's efficient preparators who with untiring zeal and resourcefulness have made this exhibit a success. In principle this group of exhibits essentially differs from the other Chinese exhibits. The latter are analytic in depicting certain periods and facts; the former are synthetic, presenting in their totality an essential and vital organ of Eastern life, and spontaneously convey a feeling of reality. Three Chinese maps, one of the year 1136 and two printed in 1461 with the imperial preface, have been hung in Hall 44. Six clearly engraved maps of China, due to the courtesy of the National Geographic Society of Washington, have been distributed over the various halls. The appearance of Hall 44 described in the last report has been improved in various ways: by the addition of labels, the reinstallation of the case containing ancient specimens of body armor increased by an important specimen obtained by purchase, and above all by the installation in wall cases of the two large painted scrolls presented by the Tuesday Art and Travel Club and appreciated in the last report. The silk tapestry acquired last year and a wood-cut reproduction of a celebrated landscape by the eminent Japanese painter Sesshu (obtained by Dr. Laufer in Tokyo) have been added to this wall, which now presents a unique spectacle of beauty of line and color. In this manner, not only is the best possible advantage taken of the wall space, but also the most efficient and impressive background is secured for the case exhibits. It was thought, for instance, very appropriate to include here Sesshu's famed scroll, inasmuch as it is Chinese scenery sketched by the artist during his sojourn in China, and the tribute paid by him in such masterly form to the beauty of Chinese landscape is a worthy monument to adorn

a hall devoted to the civilization of China. The same reason applies to the two memorable paintings with their gay and vivid description of social and commercial life in mediæval China. The numerous scenes displayed thereon have been interpreted in detail in a series of descriptive labels freely suspended from the lower rim of the wall-case, so that the interested visitor may hold them up to his eye to suit his convenience in reading. During the year an unusual amount of work has been done by the preparators. This was caused by the unusual demands made on their time from the nature of the Chinese collections and of the material brought from the South Pacific Islands by Assistant Curator Lewis. Of the work done in the Modeling Section not a little has been in compliance with requests from the Curator in charge of the Harris Public School Extension. For work of this nature casts for many replicas of the Igorot Ethnic Group, prepared last year, have been made. For the Harris Extension also have been made the following: Ground-work and houses for 8 coal-mines; ground-work and accessories for 6 Spanish forges; ground-work for 6 gopher groups; 6 Eskimo snow houses; 8 Eskimo figures; casts of 8 gold nuggets; 16 reproductions of cacao pods; one piece-mold of cacao pod for wax casting; 6 miniature rhinoceroses; 6 miniature hippopotamuses. For the Department the following work has been done by the Section of Modeling: For the Chinese Section, 42 papier-mache display figures, besides a large number of miscellaneous rubbings, reproductions of seals, bronzes and porcelains, and iron inscriptions, etc., also reproductions of various designs for display and photography; for the North American Section, 12 papier-mache display figures, 96 moccasin forms, and 66 plaster busts; for the Philippine Section, 70 papier-mache display figures, used in installing garments, etc., ground-work for spirit houses and house models, and many miscellaneous repairs and restorations. The most important work done by the modelers during the year has been the preparation of a group to be ready early next year, intended to occupy a case 12 feet square. This will be a Bagobo group and comprise, among other things, seven figures in life-size which have all been modeled from life.

In the Department of Botany little new material for exhibition purposes has been received during the past year, though that received has been of great value to the series for installation. The principal accessions were received from The Forest Economist of India, 56 fruits, gums, oils, rubbers, and fibers; from The United States Appraiser's Stores, specimens of imports of crude drugs and other vegetable substances; E. W. Blake, California, four tree trunks and a box of fruits and nuts; The Pacific Improvement Company, California, four tree trunks; H. H. Smith, Dendrologist, 13 local medical roots; Miss Jose-



phine Tilden, 32 fruits, seeds, and gums from the South Pacific Islands; The American Trading Company of Yokohama, rice, kodzu, and bamboo papers; the N. K. Fairbank Company, 16 cottonseed oil products. Notwithstanding the small amount of material received, the public installation has progressed satisfactorily. New material has been added to the following families and the cases reinstalled to accommodate the same: The Fig Family; the Nutmeg and the Arrowroot Families; the Poison Ivy Family (2 cases); the Indian Lac Family; the Horsechestnut Family; the Mallow Family; the Pea Family; and a number of other cases readjusted. Ten new double cases were received in April. These were installed with the following material: The Grape and the Buckthorn Families; the Vegetable-tallow Family; the Milkweed Family; the Dogbane Family; the Sapodilla Family; the Verbena Family; the Ebony Family; the Joint-fir Family; interesting utilizations of the Bamboo; the Australian Beefwood Family; the Birch Family; the Mint Family; the Bean Family; the Orchid Family; the Potato Family; the Ginger Family; the Geranium Family; the Magnolia Family and the Mushrooms. The North American Forestry exhibition has been augmented by twenty-two monographic installations as follows: the Winged Elm; Bitter Hickory; Black Ash; Kentucky Coffee-tree; Hackberry; Red Birch; Sugar Maple; Blue Ash; Texan Oak; White Hickory; Persimmon; Tupelo Gum; Pecan; Sweet Gum; Pignut Hickory; Shagbark Hickory; Sassafras; Swamp Cottonwood; Southern White Oak; Overcup Oak; Red Maple; and Box Elder. Ten other species are prepared and await cases. The following productions in the Section of Modeling have played a large part in the installation accomplished during the year: Ten different, growing mushroom colonies representative of as many edible or poisonous species; a full size plant of *Mirmecodium* illustrating the peculiar utilization of its bulbous base as a nest by ant colonies; a large, natural size branch of the Great Magnolia in full leaf, flower bud, flower and fruit, reproducing the freshly opened flower as well as those of several days' anthesis; a natural size branch of the Bilimbi tree, of Sumatra, in full leaf, flower and fruit; a fruiting branch of the East Indian Carambola; an enlarged flower of the common Sorrel illustrating family characteristics; a large, leafy, fruiting, and flowering branch of the peculiar Joint-fir of the tropics which join the exogenous (wood-heart) and the endogenous (fiber-heart) trees, also an enlarged flower cluster and two enlarged flowers of the same; a full size branch of the Maidenhair tree in full leaf and fruit; an enlarged flower of the Cardamom, somewhat like a pineapple in appearance, eaten as a vegetable in the Oriental tropics; a full size cluster of leafy, flowering, and fruiting vines of the Vanilla plant; a natural size flower and leaf of

the beautiful *Cattleya* orchid displaying family characteristics; a bundle of Betel leaves to accompany the exposition of betel chewing; a large branch of *Connarus* in full fruit and leaf; a tuber of the Oriental Yam; a full size plant of the common, roadside, Milkweed in full leaf, flower, and fruit; a branch of the Persimmon in full, ripe fruit; a large sprout of the edible Bamboo as sold in the markets of China and Java; a leafy, fruiting branch of the famed Mangosteen of Java, with two fruits in section showing the edible pulp; a natural size fruit of the Guava and a section showing the seed characters; and a leafy twig bearing a pair of full ripe fruits of the Osage Orange. The Curator of Botany has conceived, and the Section of Modeling cleverly worked out, a unique method of placing before the public such microscopic plants as the germs of disease and other low orders of vegetable life. In this the microscope itself has been eliminated from the installations, its magnified field only being shown in the form of reproductions distinctly portraying the objects that it is desirable to display. In this manner the following plants, invisible to the unaided eye, have been prepared and placed on exhibition:

A field showing graphically how bacteria multiply.

Forms of Bacteria:

Rod-like (*Bacterium*, *Bacillus*, *Pseudomonas*, *Vibrio*)

Globular (*Coccus*, *Streptococcus*, *Staphylococcus*, *Sarcina*)

Corkscrew-like (*Spirosoma*, *Microspira*, *Spirillum*, *Spirochæte*)

Thread-like (*Streptothrix*, *Chladothrix*, *Leptothrix*, *Gallionella*)

Various shapes (*Spirophyllum*, *Zoöglæa*, *Actinomyces*, *Chondromyces*)

The formation of spores in Bacteria.

Milk<sup>m</sup> bacteria (*Bacillus*, *Streptococcus*)

Nitrifying bacteria (*Nitrosmonas*, *Nitrobacter*, *Clostridium*)

Germs<sup>v</sup> of Cholera (*Microspira comma*)

Pneumonia (*Micrococcus pneumoniae*)

Tuberculosis (*Bacterium tuberculosis*)

Syphilis (*Spirochæte pallida*)

Typhoid (*Bacillus typhosus*)

Diphtheria (*Bacterium diphtheritidis*)

Splenic fever (*Bacterium anthracis*)

Epidemic Meningitis (*Menigococcus*)

The cultivation of Bacteria illustrating both tube and plate cultures of several species.

In these preparations the diseased tissue is represented in color on the field, and the germs, reproduced in glass, are placed, in situ, in the tissue. In this manner there have also been placed on exhibition a number of "fields" showing diatoms in colony and individual growths as well as an exemplification of their life

history and their structure. Diatoms were formerly appreciated mainly because of their æsthetic beauty as microscope objects, but recently they are coming into prominence on account of their recognition as one of the fundamental food supplies of marine life. The series exhibited comprises:

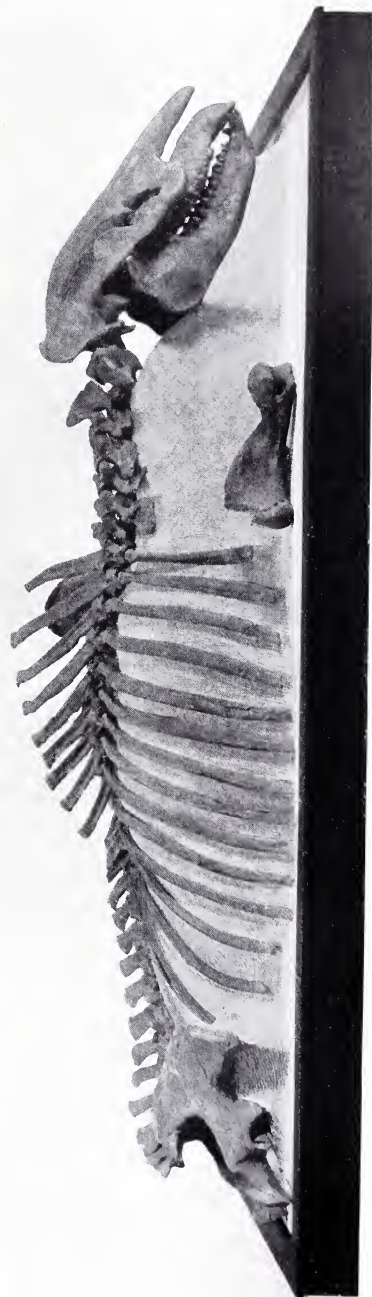
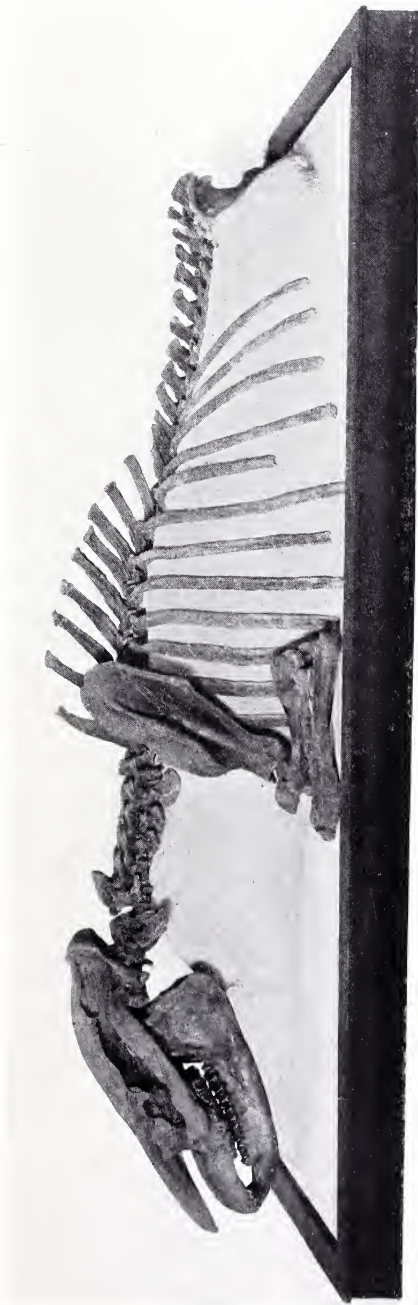
- The Barrel Diatom (*Melosira Borreri*) in colony and individual growth.
- The Triangle Diatom (*Triceratium favus*) in single and dissected specimens, the latter illustrating the structural parts of diatoms.
- The Bristled Diatom (*Chatoceras Lorenzianum*) in chain formation.
- The Fan Diatom (*Licmorpha flabellata*) two colonies attached to an alga.
- The Sun Diatom (*Planctionella Sol*), highly magnified.
- The Bristling Rod Diatom (*Bacteriastrum varians*), in chain colony growth.
- Two Stylus Diatoms (*Rhizosolenia styliformis* and *setigera*), in chain growth and separate individuals.

All these forms are reproduced very highly magnified to show their distinctive characters.

The meteorite collection has been entirely reinstalled in order to incorporate into it the specimens, numbering about 1,600, of the Ward-Coonley collection. As exhibition space was not available for the entire collection it was divided, the iron meteorites being installed in Alcove 106 and the stone and iron-stone meteorites in Hall 63, which is not at present open to the public. In making this reinstallation, all specimens have been placed according to the falls to which they belong so as to make the representation of the different falls as complete as possible. The installation in Alcove 106 is in the cases previously used for the collection, and that in Hall 63, in the cases obtained with the Ward-Coonley collection. All casts have been withdrawn from exhibition partly for lack of space and partly because their presence is liable to cause confusion. The installation of the meteorite collection is now complete with the exception of the Canyon Diablo specimens, the bases for which have not yet been prepared. It is intended that the Canyon Diablo specimens, when installed, will occupy a single case instead of being scattered among several as formerly. The large iron meteorite from the Davis Mountains, Texas, obtained during the year, was installed in a floor case in Alcove 106. The bases of the glacial slabs in Alcove 103 have been mahoganized and some minor changes made in the installation of this alcove. All of the collections of ores of copper, zinc, iron, and many minor metals have been removed from the upright cases in Hall 34 and reinstalled. This removal was for the purpose of tinting the interior of the cases to the uniform black color now adopted for all cases. In reinstalling these collections considerable rearrange-

ment was made in order to improve sequences and permit of the introduction of new material. The new material was in part illustrative of the uses of the metals and in part illustrative of ores and ore dressing. Among new series so added may be mentioned that received from Francis C. Nicholas illustrating the development of hematite from pyrite and that from the Oliver Mining Company showing the concentration of iron ores by washing. New illustrations of uses of metals added include series illustrating nickel plating, nickel steel, fracture and color of different alloys of copper and zinc, and glass tinting and making. The suites of six slabs of Georgia marbles, 13 slabs of Vermont marbles, and three slabs of Canadian marbles received during the year were installed in their appropriate places in the marble collection in Hall 34, some readjusting of space and specimens having been necessary for this purpose. Some additions to the collections of abrasives, asbestos, and vein formations were installed in Hall 31, and rearrangements of the series already on exhibition were made for this purpose. Nine floor cases of clays and sands have been installed in Hall 63. These cases include six cases illustrating the classification of clays, one case showing effects of different components on clays, one case of refractory materials and one case showing uses of silica. A floor case of petroleum products has also been installed in this hall and a wall case showing varieties of soils in Hall 61. Two cases of graphite and asphalt in Hall 35 were rearranged in order to add a collection illustrating the uses of graphite. A model of a coal mine, prepared for the uses of the Harris Extension Fund, was installed in Hall 34 pending its use in the schools. This model represents both the above-ground and underground equipment of a large colliery, the features shown being typical of those generally employed. Above ground are shown in miniature a tippie and fan, boiler house, machine shop and a village of miner's houses. In front of these the ground is represented as cut away to a depth of 200 feet in order to uncover the underground system of galleries and chambers. Hoisting and air shafts connect the two portions. The underground portion is worked on the panel-retreating system. Three panels are shown; one worked out and caved in, one in active production, and one just being opened. Other exhibits to the number of 20 have been prepared for the use of the Harris Extension. These include series illustrating the origin of coal, coal plants of Illinois, invertebrate fossils, ores of iron, ores of several metals, useful minerals, abrasives, glass manufacture, steel manufacture, graphite, asbestos, salt, etc. Floor cases have been placed in Halls 35 and 59 for the installation of the *Dolichorhinus* mount and the skeleton of the fossil camel *Oxydactylus*. The *Dolichorhinus* mount is the most nearly complete skeleton of this form





SKELETON OF EARLY HOOFED MAMMAL (*Dolichorhinus longiceps*) MIDDLE EOCENE OF UTAH.



in existence. It shows all but a few limb bones of a complete individual. The skeleton is mounted in a recumbent position surrounded by matrix. As the rarity of the form will probably make detailed study of its parts frequently desirable, most of the parts have been mounted in such a way that though appearing joined together, they can be easily removed for examination. The mount was prepared from material obtained by the Museum expedition to the Uintah Basin in 1910. Considerable labor was involved in preparing the mount from the fact that about half the bones were in such a distorted position as found that it was necessary to remove them entirely from the matrix before they could be brought into proper relation for mounting. In order to make room for the new cases mentioned, the cast of *Dinotherium* was removed from Hall 59 and the ichthyosaur and plesiosaur models from Hall 35. The skull of the giant beaver *Castoroides* obtained during the year was assembled with other bones of the same genus and placed on exhibition in Hall 35. A collection of remains of extinct Patagonian mammals including some portions of the carapace of a glyptodon was installed in a wall case in Hall 59 and a floor case of White River turtles was placed on exhibition in the same hall. Some rearrangement of the adjoining exhibits was made in connection with this addition. A wall case of Oligocene mammals, chiefly titanotheres, was installed in Hall 61 and one of Quaternary forms, chiefly remains of the Mammoth and Mastodon, in the same hall. In Hall 60 a case of marine Eocene mammals and other forms was installed, and in Hall 63 a table case of Miocene mammals. A wall case of Devonian invertebrate fossils was installed in Hall 61 and one of Cretaceous and Tertiary invertebrates in Hall 65. Some additions were made to the invertebrate fossils installed in Hall 33 and some rearrangement performed in this connection. The Assistant Curator devoted over three months' time to the analysis of Chinese bronzes for the Department of Anthropology. One hundred complete quantitative analyses of these bronzes were made. Other quantitative analyses made by the Assistant Curator during the year included those of the Davis Mountains and MacQuarie River meteorites. Numerous qualitative analyses have also been made in the Lake Avenue laboratory, a number of meteorite sections etched, and several preparations for the exhibition series made. The material stored in trays in Hall 61, which had in part been withdrawn from exhibition at the time of moving from the West Annex, has been carefully gone over, much condensed and provided with better protection from dust and disintegration. It has also been grouped so that every specimen is readily accessible and each specimen has been labeled sufficiently for identification. As at present arranged, the material occupies 150 wooden trays 18 x 26 inches in size.



Early in the year the paleontological laboratory was moved from the quarters temporarily occupied in the section of taxidermy to Halls 77 and 78 of the West Annex. Side windows were cut, work tables were fitted, and a sink, benches, and racks were installed in these halls. Racks for 350 trays were erected in part of Hall 78 and a sorting table provided. The semi-prepared and duplicate material was carefully arranged in these trays, and its complete preservation and accessibility thus assured. In these quarters the preparation of vertebrate and invertebrate fossils has been actively carried on through the year and a notable amount of material worked out. The most important single piece prepared during the year was a slab showing twenty-six skeletons of the fossil water deer, *Leptomeryx evansi*. This slab was collected in South Dakota in 1905. It was known at the time to be a remarkable specimen, but its great richness in individuals was only realized on its being worked out. In preparing the slab for exhibition the upper surface of the stone has been chiseled away with great care, leaving the skeletons exposed in high relief upon a background of the natural matrix. Not a bone has been disturbed from its original position in the rock. Of the twenty-six individuals shown, nine are in articulated position. Some are in a natural reclining position, while others have legs, vertebral columns or skulls dislocated and some are entirely disarticulated. The slab presents one of the most notable aggregations of fossil mammals to be found in any museum, and exceeds all in the number of individuals shown associated. The size of the slab is four by seven feet. Sufficient material was secured in connection with this to enable an articulated skeleton to be mounted for exhibition beside it. The specimen as a whole will make known for the first time the complete structure of this animal, portions of which have been known to science for sixty years. The preparation of the slab has occupied a large part of the time during the year of Preparator Abbott under the supervision of the Assistant Curator of Paleontology. Mr. Abbott was the discoverer of the specimen in the field. A large number of other valuable specimens of vertebrate fossils collected by the Museum expeditions of 1905, 1906, and 1908 in the Western States have been prepared for exhibition during the year or have been freed from their matrix so as to be readily available for study or exchange. The specimens so prepared, determined, and installed during the year include 28 miscellaneous specimens of Oligocene titanotheres, three skulls and one jaw of Miocene creodonts, four carapaces and plastrons of Miocene tortoises and one each of Oligocene tortoise and Eocene turtle. Eight specimens of Miocene horses, 12 of Miocene creodonts, 11 of Miocene camels and one each of Miocene rhinoceros and camel, were also prepared sufficiently for identification. The skeleton of *Canis diurus* received from the University of California was freed from adhering and



HABITAT GROUP OF BIRDS OF LAYSAN ISLAND. The Albatrosses in the foreground Including Man-o-war Birds, Petrels, Terns and Albatrosses. „ are indulging in their peculiar „dance“.



inhering asphalt and made ready for mounting. Specimens of Patagonian fossil mammals, 28 in all, were also prepared, determined, and installed. The Assistant Curator of Invertebrate Palaeontology has prepared and published descriptions of 12 new species and one new genus of trilobites which he collected in the Maquoketa beds of Fayette County, Iowa, and has cleaned and identified a large amount of other material which he obtained at the same localities. In addition he has mounted on labeled tablets for exhibition a large number of invertebrate fossils, the work of mounting having progressed as rapidly as the tablets could be obtained from the printer.

Several bird and mammal groups are nearing completion, but only one was actually installed during the year — a large group representing bird life on Laysan Island. This island, situated about 400 miles west of Honolulu in the mid-Pacific, has been set aside as a United States Government Bird Reservation on account of the vast number of pelagic birds that breed there. The group includes eleven species of birds (with a number of nests and eggs), among them being Petrels, Man-o'-war birds, and two species of Albatrosses. The latter are shown indulging in their peculiar "dance." The painted background shows the character of the island and the great number of birds which breed there, an illustration of environment, being of educational value. A very large group of American Bison is in the final stage of installation and will soon occupy space in the central rotunda of the Museum. This group of representative American mammals contains six Bison of varying ages, shown in a characteristic Western Plains setting, to which environment "atmosphere" has been given by the addition of a few small animals, such as prairie dog, a burrowing owl, and a rattlesnake. A large amount of taxidermy work has been planned and partly executed. Groups in various stages of completion are: Olympic Elk, Capybara and Jaguar, and a chipmunk and Spermophile group. Fresh specimens for an imposing group of Alaskan Moose and also for an Arctic bird group (Walrus Island) have been received, and work on these groups will begin at once. Five specimens of mammals have been added to the serial exhibition collection and several more are partly mounted, some of which will be completed at an early date. These are Asiatic Takin, Spectacled Bear, Kansu Deer, Mandril, and White-lipped Peccary. Some twenty specimens were added to the series of mounted birds including two examples of the exceedingly rare Trumpeter Swan, a gift from Mr. J. M. Barnes of Lacon, Illinois. During the year the attention of the Division of Entomology was given as much as possible to work that pertained directly or indirectly to the installation of exhibits. A step in this direction was the week spent in completing the work of determining local grasshoppers or Orthoptera, which, it is planned, will eventually

form a part of an exhibition series of Illinois insects. With the same end in view, some time was devoted to local bugs or Hemiptera, the insects that follow the grasshopper in scientific arrangement. At different periods, equaling about three months, the Assistant Curator of Entomology gave his attention to the spreading and labeling of exotic butterflies representing stored accessions intended for exhibition. By means of the material thus prepared, also by using the duplicates which were acquired with the Strecker collection, it will be possible to make many desirable additions to the butterfly exhibit when it is transferred to the new insect cases. The attention of the assistant was largely given to the making of life-history groups.

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM OF NATURAL HISTORY. — The problem of supplying museum material to the public schools of Chicago under the auspices of The N. W. Harris Public School Extension of Field Museum has been initiated and satisfactory progress may be reported. During the first part of the year considerable time was spent in seeking information, formulating plans of operation, and inaugurating methods of procedure. While these steps were necessary and essential, approved visible results during that period were few but helpful. Considerable of this period was devoted to the development of the character and construction of a type of exhibition case. It is believed that the adopted style of case meets the requirements for stability, portability, usefulness, and appearance. It is the aim to standardize all cases, so far as the length and height are concerned. The depths of the cases has so far been determined at four, seven and ten inches. These variations of depths have met thus far the requirements of all installed material. In the very earliest stages of determining the suitability of the cases to be circulated, one very important feature had to be carefully considered. It was determined that the two framed explanatory labels which are to accompany each case to the schools should be a part of the case proper, so as to avoid leaving the labels either at the Museum or at the school when the cases were either being delivered or returned. To meet this requirement a scheme of having the two framed labels on grooves affixed to the back of the case was adopted. This arrangement permits of the labels being extended to full view on either end of each case when in use in the classroom, and of being closed flush with the cases when being transported to and from the Museum. In order to prevent as much as possible the handling of cases when in schoolrooms, and that the contents of the cases may be easily seen and studied by a number of students at one time, two hanging appliances have been attached to the top edge of the back of each case, that it may hang from hooks in the wall or upon a standard stand in full view of the classes. To lessen the occurrence of



accidents to the cases when being transported by pupils from room to room, experience clearly showed the advisability of having a light, strong handle at each end of a case. The design of a black painted wooden specimen and label holder in one piece assists not only in the rapid installation of collections, but in the general appearance of neatness and order as well. The cases and contents which are now ready for distribution among the schools, were designed with the idea of their serving as keys or sample cases from which duplicates can be easily and quickly prepared. Eighty cases of loan collections are now available for use in the schools. Thirty-eight of these cases represent zoölogical material, twenty-one geological, twenty botanical, one anthropological. Many public spirited individuals and corporations have given substantial aid by presenting materials of educational value. In many instances the materials represent the various stages of manufacture from the raw to the finished products. Such collections, accompanied by carefully prepared labels, should prove of value in geographical work, in commercial studies, and also in nature study courses. During the spring, each of the following schools — Burr, Mann, Warren, McAllister, Haines Practice and Carter Practice—made use of the cases for a period of two weeks. The request of the Superintendent of Schools for cases to be sent to Burnside vacation school opened up an entirely new field of museum extension work. The request was granted, and for the entire period of the usual summer vacation, several cases were on exhibition at the above school, and not only were these cases viewed and studied by the pupils, but by many of the residents of the neighborhood adjacent to the school.

PHOTOGRAPHY AND ILLUSTRATION.—The following table shows the actual results only of a large series of detailed operations:

	Number of Negatives made	Number of Prints made	Number of Lantern Slides made	Number of Enlargements made	Number of Negatives developed for Expeditions	Number of 6½x8½ Posi- tives made. Used in mak- ing large Negatives
Director's Office . . . .	8	15	..	..	..	..
Anthropology . . . .	364	907	142	..	186	..
Botany . . . . .	157	608	100	84	12	96
Geology . . . . .	179	346	83	..	..	..
Zoölogy . . . . .	17	713	95	..	278	..
Harris Extension . . . .	41	183	..	2	..	2
Distribution . . . . .	..	87	117	..	..	..
Gift . . . . .	..	160	..	..	..	..
Sale . . . . .	..	732	..	..	..	..
Totals . . . . .	766	3,751	537	86	476	98
Total number of Catalogue entries during year 1913 . . . . .						5,714
Total number of Catalogue entries to December 31, 1913 . . . . .						107,268

PRINTING.—The Head Printer reports that, notwithstanding the time devoted to the needs of the N. W. Harris Public School Extension, the regular Museum label work has been given the needed attention with the result that the Section has been able to keep up with the incoming copy.

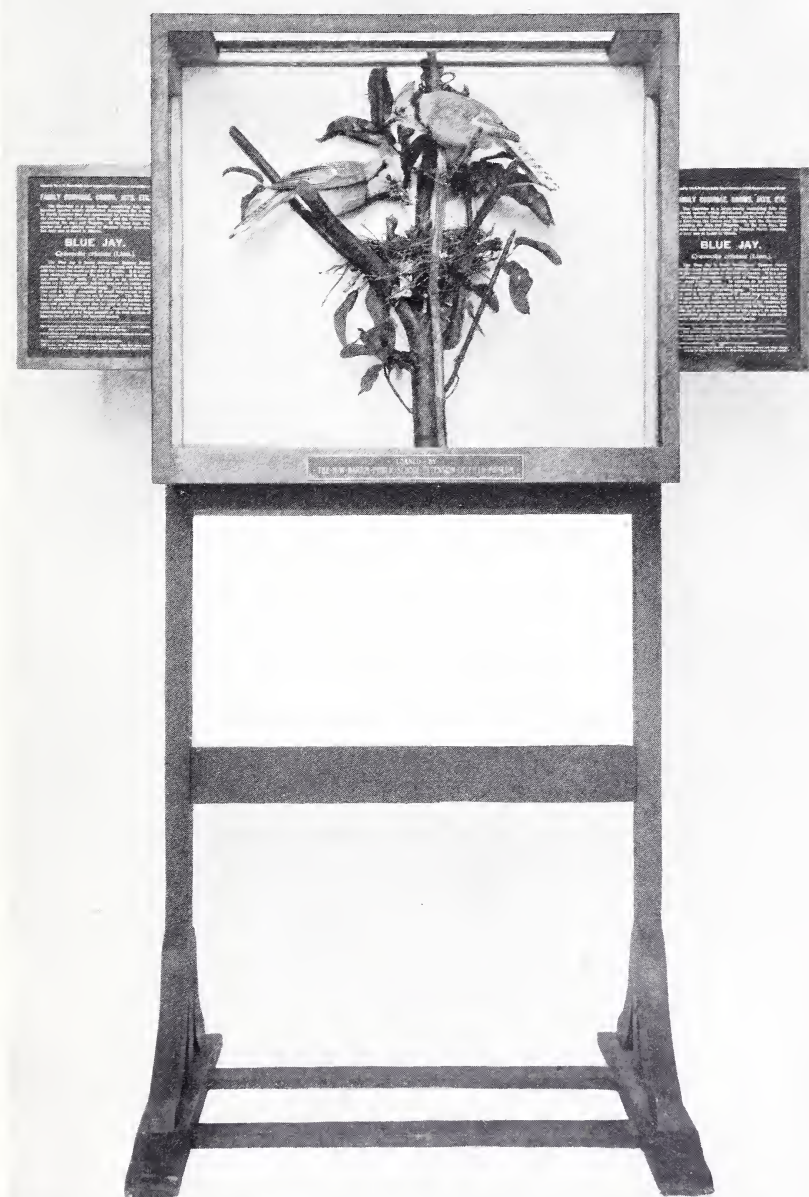
The number of labels and other impressions which were turned out by the Section are tabulated below:

	Exhibition Labels	Other Impressions
Anthropology . . . . .	4,107	13,350
Botany . . . . .	2,922	26,321
Geology . . . . .	6,337	.....
Zoölogy . . . . .	2,695	18,400
General . . . . .	....	59,738
N. W. Harris Public School Extension . . . . .	5,545	11,046

ATTENDANCE.—The total number of visitors recorded during the year was 214,144, being a decrease of approximately 400 in the figures for the previous year. The classification of the attendance during the year is shown elsewhere in the report and a list of the school classes (twenty pupils or more) that visited the Institution during the year follows:

Schools and Locations	Teachers	Pupils
University Elementary — Fifty-ninth Street and Kenwood Avenue	3	20
Sullivan — Eighty-third Street and Houston Avenue . . . . .	2	37
Ray — Fifty-seventh Street and Kenwood Avenue . . . . .	2	24
Art Institute — Michigan Avenue and Adams Street . . . . .	1	30
Hyde Park High — Sixty-second Street and Stony Island Avenue .	1	88
University of Chicago — Chicago, Illinois . . . . .		20
Art Institute — Michigan Avenue and Adams Street . . . . .	1	30
Chicago Latin — 18 East Division Street . . . . .	3	22
Addison Normal — Addison, Illinois . . . . .	1	60
Ray — Fifty-seventh Street and Kenwood Avenue . . . . .	1	21
Andersen — West Division and Lincoln Streets . . . . .	1	40
Shakespeare — Forty-sixth Street and Greenwood Avenue . . .		30
Hull House — 800 South Halsted Street . . . . .	1	25
University of Chicago — Chicago, Illinois . . . . .		45
Chicago Academy of Fine Arts — 6 East Madison Street . . . .		81
Chicago Latin — 18 East Division Street . . . . .	1	20
University of Chicago — Chicago, Illinois . . . . .		21
University of Chicago — Chicago, Illinois . . . . .		25
University Elementary — Fifty-ninth Street and Kenwood Avenue	1	21
Hyde Park High — Sixty-second Street and Stony Island Avenue .	1	30
Seward — Forty-sixth Street and Hermitage Avenue . . . . .	13	207
University Elementary — Fifty-ninth Street and Kenwood Avenue	3	31
Marshall High — Adams Street and Spaulding Avenue . . . . .	2	45
University of Chicago — Chicago, Illinois . . . . .	1	26
New Trier High — Winnetka, Illinois . . . . .	1	20





TYPE OF CASE LOANED TO PUBLIC SCHOOLS BY THE N. W. HARRIS PUBLIC SCHOOL  
EXTENSION OF FIELD MUSEUM.



Schools and Locations	Teachers	Pupils
Moody Bible Institute — 153 Institute Place . . . . .		32
Epiphany — 4219 West 25th Street . . . . .	2	21
Chicago Latin — 18 East Division Street . . . . .	3	20
Wendell Phillips High — Thirty-ninth Street and Prairie Avenue . . . . .		25
Wendell Phillips High — Thirty-ninth Street and Prairie Avenue . . . . .		21
Clifton High — Clifton, Illinois . . . . .	1	23
Wendell Phillips High — Thirty-ninth Street and Prairie Avenue . . . . .		29
Luther Institute — 1135 South Marshfield Avenue . . . . .	5	95
Marshall High — Adams Street and Spaulding Avenue . . . . .	1	28
Parker High — 330 Webster Avenue . . . . .	1	60
St. Charles — St. Charles, Illinois . . . . .	1	42
Steger — Steger, Illinois . . . . .	1	20
Warren — Ninety-second Street and Central Avenue . . . . .	3	40
University of Chicago — Chicago, Illinois . . . . .	1	25
Hyde Park High — Sixty-second Street and Stony Island Avenue . . . . .	1	76
University of Chicago — Chicago, Illinois . . . . .	1	25
Kenwood — Fiftieth Street and Lake Park Avenue . . . . .	1	42
Dewey — Fifty-fourth Street and Union Avenue . . . . .	1	20
William Penn — Sixteenth Street and Avers Avenue . . . . .	1	21
Warren — Ninety-second Street and Central Avenue . . . . .	1	32
Sherman — Fifty-first and Morgan Streets . . . . .	3	74
West Pullman — West Pullman, Illinois . . . . .		21
St. Michaels — Eighty-third Street and Ontario Avenue . . . . .	1	38
West Pullman — West Pullman, Illinois . . . . .	2	20
Juvenial Home — 771 Gilpin Place . . . . .	4	21
Chicago Hebrew Institute — 1258 Taylor Street . . . . .	4	21
Holden — Thirty-first and Loomis Streets . . . . .	1	45
University of Chicago — Chicago, Illinois . . . . .	1	56
Burnside — Ninety-first Place and Langley Avenue . . . . .	2	40
Jefferson Vacation — Elburn Avenue and Laflin Street . . . . .	6	52
McCormick Vacation — Sawyer Avenue and West Twenty-seventh Street . . . . .	14	535
St. Marys — 1031 Cypress Street . . . . .	2	23
Central Y. M. C. A. — 19 South La Salle Street . . . . .	4	28
Copernicus Vacation — West Sixtieth and Throop Streets . . . . .	20	292
Bohemian — 1510 West Eighteenth Street . . . . .	2	45
University of Chicago — Chicago, Illinois . . . . .		27
Chicago Orphan — Fifty-first Street and South Park Avenue . . . . .	1	46
University of Chicago — Chicago, Illinois . . . . .	1	32
Washington — North Morgan Street and Grand Avenue . . . . .	1	55
Chicago Evangelistic Institute — 1754 Washington Boulevard . . . . .	1	41
Chicago Academy of Fine Arts — 6 East Madison Street . . . . .	1	41
University Elementary — Fifty-ninth Street and Kenwood Avenue . . . . .	1	25
Holy Family — 1444 West Division Street . . . . .	2	24
Home for Jewish Friendless — 5228 Ellis Avenue . . . . .	2	55
Moody Bible Institute — 153 Institute Place . . . . .		31
Carter Practice — Sixty-first Street and Wabash Avenue . . . . .	2	45
University Elementary — Fifty-ninth Street and Kenwood Avenue . . . . .	1	20
University of Chicago — Chicago, Illinois . . . . .		35

Schools and Locations	Teachers	Pupils
Art Institute — Michigan Avenue and Adams Street . . . . .	1	22
University Elementary — Fifty-ninth Street and Kenwood Avenue	2	20
Chicago Latin — 18 East Division Street . . . . .	5	25
University Elementary — Fifty-ninth Street and Kenwood Avenue	3	22
Andersen — West Division and Lincoln Streets . . . . .	1	37
Branscroft — Maplewood and Wabansia Avenue . . . . .	1	30

Herewith are also submitted financial statements, analysis of attendance, list of accessions, articles of incorporation, amended by-laws, names of members, etc.

FREDERICK J. V. SKIFF, Director.

# FINANCIAL STATEMENT

## RECEIPTS AND DISBURSEMENTS

January 1, 1913, to December 31, 1913

### RECEIPTS

Cash in Treasurer's hands, General Fund, December 31, 1912 . . . . .	\$8,342.10
Cash in Treasurer's hands, Endowment Sinking Fund, December 31, 1912 . . . . .	504.44
Petty Cash on hand, December 31, 1912 . . . . .	739.95
Dues of Annual Members . . . . .	1,200.00
Life Members . . . . .	1,000.00
Life Memberships Fund — Investment Income . . . . .	275.00
Admissions and Check Rooms . . . . .	5,886.15
Sale of Guides . . . . .	218.00
South Park Commissioners . . . . .	15,000.00
Interest on Investments and Bank Balances . . . . .	44,784.39
Field Endowment Income . . . . .	136,500.00
Field Endowment Sinking Fund . . . . .	500.00
Field Endowment Sinking Fund Income . . . . .	152.89
New Exhibition Cases Fund . . . . .	1,829.24
New Exhibition Cases Fund Income . . . . .	2,760.00
New Exhibition Cases Fund Investments retired . . . . .	22,500.00
Field-Sprague Ornithology Fund . . . . .	578.00
Joseph N. Field South Pacific Islands Fund . . . . .	12,268.13
Huntington W. Jackson Library Fund . . . . .	40.00
N. W. Harris Public School Extension . . . . .	171.15
Donations . . . . .	5,670.62
Sundry receipts . . . . .	17.27

\$260,937.33

### DISBURSEMENTS

Salaries . . . . .	\$95,201.53
Guard Service . . . . .	13,152.69
Janitor Service . . . . .	8,003.03
Fire Protection . . . . .	5,216.42
Heat and Light —	
Wages . . . . .	\$4,071.28
Fuel . . . . .	6,081.68
Gas . . . . .	452.00
Renewals, Supplies and Sundries . . . . .	977.74

11,582.70

## Repairs and Alterations —

Wages of Carpenters, Painters, Roofers, etc. . . . .	\$9,643.18	
Material used — paints, oils, glass, lumber, plaster, etc. . . . .	2,467.14	
Constructing Sewer . . . . .	341.00	
Restoration of West Annex . . . . .	2,142.61	\$14,593.93

Sections of Printing and Photography . . . . .		7,302.68
Collections, purchased . . . . .		13,832.00
Departmental Expenses . . . . .		6,350.00
Expeditions . . . . .		4,725.58
Publications . . . . .		2,763.17

## General Expense —

Freight, Expressage and Teaming . . . . .	\$2,321.51	
Stationery . . . . .	308.33	
Postage, Telephone and Telegrams . . . . .	752.87	
Sundries . . . . .	3,229.59	6,612.30

## Furniture and Fixtures —

New Exhibition Cases . . . . .	\$32,453.12	
Sundries . . . . .	88.00	32,541.12

## The Library —

Books and Periodicals . . . . .	\$1,401.82	
Binding . . . . .	741.79	
Expense . . . . .	78.73	2,222.34

Field-Sprague Ornithology Fund . . . . .		348.25
Joseph N. Field South Pacific Islands Fund . . . . .		12,429.70
Stanley McCormick Hopi Fund . . . . .		12.20
Mrs. T. B. Blackstone Fund . . . . .		273.96
Homer E. Sargent Fund . . . . .		12.66

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\$237,176.26

## In Treasurer's hands, December 31, 1913 —

General Fund . . . . .	\$11,690.37	
New Exhibition Cases Fund . . . . .	930.75	
Endowment Sinking Fund . . . . .	180.00	12,801.12

Petty Cash on hand, December 31, 1913 . . . . .		739.95
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## New Exhibition Cases Fund — advance to Building Fund . . . . .

Fund . . . . .		3,500.00
General Fund — Investments . . . . .		5,500.00
Endowment Sinking Fund-Investment . . . . .		1,220.00

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\$260,937.33

# ATTENDANCE AND RECEIPTS FROM JANUARY 1 TO DECEMBER 31, 1913

## ATTENDANCE.

Paid Attendance —		
Adults . . . . .	20,547	
Children . . . . .	2,166	22,713
Free Admission on Pay Days —		
School Children . . . . .	3,836	
Students . . . . .	3,410	
Teachers . . . . .	505	
Members: Corporate . . . . .	36	
Annual . . . . .	37	
Life . . . . .	1	
Officers' Families . . . . .	53	
Special . . . . .	193	
Press . . . . .	17	8,088
Admissions on Free Days —		
Saturdays . . . . .	40,842	
Sundays . . . . .	142,501	183,343
Total Attendance . . . . .		214,144
Highest Attendance on any one day (July 20, 1913) . . .		7,991
Highest Paid Attendance on any one day (September 1, 1913)		618
Average Daily Admissions (363 days) . . . . .		589
Average Paid Attendance (259 days) . . . . .		87

## RECEIPTS.

Guides Sold — 872 at 25 cents each . . . . .	\$218.00
Articles Checked — 10,656 at 5 cents each . . . . .	532.80
Admissions . . . . .	5,353.35
	<hr/>
	\$6,104.15



## ACCESSIONS

### DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AYER, E. E., Chicago.

- Pair of gold bracelets — Italy.
- Female Ushabti figure of wood — Egypt.
- Belt, silver plates, Navajo.
- Ceremonial Copper Shield, Kwakiutl.

BLACKSTONE, MRS. T. B., Chicago.

- Ancient Chinese bone carvings — China.
- Ancient bone carvings — Shantung, China.
- Pair of bronze staves — Shantung, China.

FIELD, JOSEPH N., Manchester, England. South Pacific Islands Fund.

- General ethnological collection — Melanesia (Collected by A. B. Lewis).
- Skulls and skeletons — Melanesia.

FIELD MUSEUM OF NATURAL HISTORY.

Purchases:

- Painted scroll by Ku K'ai-chi in British Museum, reproduced in colored wood cut — China.
- Parade uniform of officer belonging to the Imperial Palace Guard, complete with helmet, boco-case and trunk — China.
- Decorated Buffalo-hide robe.
- Four Navajo blankets.

GARST, GOODWIN, Coon Rapids, Iowa.

- Flint arrowhead — Coon Rapids, Iowa.

GISE, MISS VIRGINIA, Chicago.

- Miscellaneous ethnological specimens — Samoa and South Sea Islands.

LANDIS, FRANKLIN, Chicago.

- Coat of intestines trimmed with fur—Aleutian Islands.

MOORE, CLARENCE B., Philadelphia, Pa.

- Archæological specimens.

PFAFFER, DR. L., Weimar, Germany.

- Prehistoric archæological remains.

ROBERTS, GEO. C., Sharon Hill, Pa.

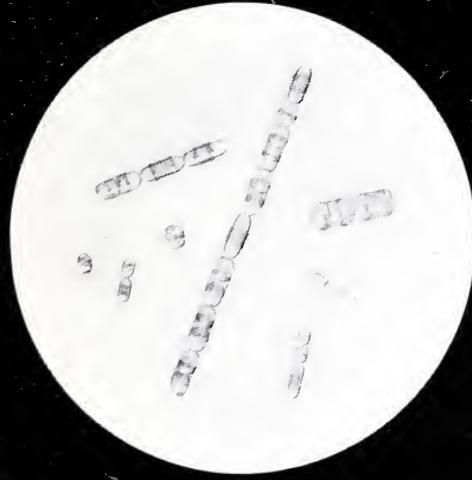
- Flint arrowheads — Pennsylvania (exchange).

SETON-KARR, H. W., London, England.

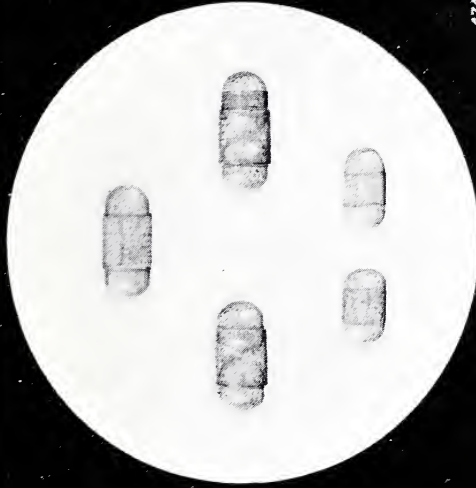
- Flint archæological specimens — Egypt.

SIAMESE GOVERNMENT, Bangkok, Siam.

- 4 Buddhistic clay tablets — Siam.



COLONY GROWTH  
HIGHLY MAGNIFIED



SINGLE INDIVIDUALS  
MORE HIGHLY MAGNIFIED

474003

## BARREL DIATOM.

(*Melosira Barrelet*).

Simple, cylindrical diatoms of brackish water. This species is usually found in the form of minute rods consisting of many individuals attached end-to-end. The capsule-like shell, or skeleton, consists of a broad, barrel-shaped band (*girdle*) closed at both ends by bulging covers (*valves*).

(1912).

In the circle above is shown the formation of the new valves of two "daughter cells" within the barrel of a mature "mother cell", and the subsequent growth of these daughter cells by increase in width of the girdle.

Reproduced from nature.

MASSACHUSETTS COAST.

MUSEUM SUBSTITUTE FOR THE MICROSCOPE.

Reproductions of diatoms in the microscopic field



## DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AMERICAN TRADING CO., Yokohama, Japan.

Japanese rice, kodzo and bamboo papers — Japan.

ARTHUR, J. C., Lafayette, Ind.

Photographs of Cedar Apples — Indiana.

BLACK, E. W., Santa Margarita, California.

Economic specimens and dry fruits — California.

BRANDEGEE, T. S., Berkeley, California.

1 herbarium specimen — Mexico.

BRITTON, MRS. E. G., New York City.

4 illustrations.

CLAYBERG, H. D., Chicago, Illinois.

1 herbarium specimen — Michigan.

CORY, MRS. C. B., Chicago, Illinois.

1 herbarium specimen — Wisconsin.

DEAM, CHAS. C., Bluffton, Indiana.

6 herbarium specimens — Indiana and Florida.

DEPARTMENT OF AGRICULTURE, Kingston, Jamaica, British West Indies

3 branches and fruits of *Capparis jamaicensis* — Jamaica.

DE SELM, JUDGE ARTHUR W., Kankakee, Illinois.

229 herbarium specimens — Illinois and Michigan.

244 herbarium specimens — Kankakee, Illinois.

371 dried plants — Illinois.

FAIRBANK COMPANY, THE N. K., Chicago, Illinois.

16 cottonseed oil products.

FIELD MUSEUM OF NATURAL HISTORY.

Collated by C. F. Millspaugh:

16 herbarium specimens — Peru and Ecuador.

56 herbarium specimens — Java, Malaya, Mexico, United States and West Indies.

53 herbarium specimens — Europe, Australia and West Indies.

33 plant fragments, descriptions and drawings.

3 herbarium specimens — Cuba.

53 herbarium specimens — United States, West Indies, Mexico, Central and South America.

3 herbarium specimens — Mexico and West Indies.

Collated from Museum Library:

5 colored plates mounted as herbarium specimens.

Collated by E. B. Uline:

3 drawings of *Amaranthaceæ* and *Dioscoreaceæ*.

Collected by O. E. Lansing, Jr.:

9 herbarium specimens — Indiana.

Collected by H. H. Smith:

Fruits of *Euonymus atropurpureus* — Indiana.Fruits of *Viburnum prunifolium* — Indiana.Gum, seeds and cones of *Pinus Sabiniana* — California.

125 herbarium specimens — Illinois and Indiana.

Dry fruits of *Rhus radicans* (poison ivy) — Indiana.

Made by Section of Photography:

7 photographs of type plants.

Photo of *Cacalia discolor* — Cuba.

Purchases:

Economic specimens (*Myristica fragrans*) — Butter.

Economic specimens (*Myristica fragrans*) — Oil.

109 herbarium specimens — South Pacific Islands.

1 specimen of sealing wax.

1 specimen of shell lac.

1,000 herbarium specimens — Palawan, Philippine Islands.

221 herbarium specimens — Canada.

557 herbarium specimens — Santo Domingo.

338 herbarium specimens — Montana, Nevada, California, Utah and Wyoming.

612 herbarium specimens — South Dakota.

490 herbarium specimens — South Pacific Islands.

32 economic specimens — South Pacific Islands.

359 herbarium specimens — Mexico.

1,159 herbarium specimens — Mexico.

122 herbarium specimens — Tobago and Trinidad.

101 herbarium specimens — Santo Domingo.

507 herbarium specimens — Philippines.

51 herbarium specimens — South Dakota.

105 herbarium specimens — Tobago, West Indies.

50 herbarium specimens — South Dakota.

56 herbarium specimens — Tobago, West Indies.

87 herbarium specimens — South Dakota.

218 herbarium specimens — Philippine Islands.

Modeled by Section of Modeling:

*Toxylon pomiferum* — fruits.

*Psidium Guajava* — fruit section.

*Garcinia Mangostana* — fruiting twig, fruit, and fruit section.

*Arundinaria* sp. — sprout.

*Cattleya Trianæi* — flower.

*Asclepias Syriaca* — whole plant.

*Diospyros Virginiana* — fruiting branch.

*Connarus diversifolius* — fruiting branch.

*Dioscorea sativa* — tubers.

*Gnetum Gnemon* — branch.

Plant of *Vanilla planifolia*.

Leaves of *Piper Betel*.

Reproduction of small branch of vanilla plant.

Reproduction of fruit head of "Cardamom." (*Elettaria*.)

Modeling of enlarged flowers of *Gnetum*.

Fruit of *Averrhoa Carambola*.

Whole branch of *Averrhoa Bilimbi* in leaf, flower and fruit.

Diatom — *Triceratium favus*.

Diatom — *Planktonella Sol*.

Flower of *Oxalis corniculata*.

Model of branch of *Magnolia fœtida*.

- Diatom — *Melosira Botteri*.  
Diatom — *Chaetoseros Lorenzianum*.  
*Bacteriastrum varians*.  
*Rhizosolenia styliformis* and *R. setigera*.  
Models of *Cleome spinosa* — enlarged flower, fruit natural size, ovary section enlarged.  
Model of Diatom *Licmophora flabellata*.  
Reproduction of a plant of *Hydnophytum formicarum*.  
9 mushroom models.  
49 reproductions of Bacteria.  
A full leafy and fruiting branch of *Ginkgo biloba*.  
Reproduction of a group of fungi (*Armillaria mellea*).  
FOREST ECONOMIST, Dehra Dun, India.  
55 Vegetable products — India.  
Milk and Caoutchouc from *Calotropis* — India.  
FRIESSER, J., Chicago, Illinois.  
1 herbarium specimen — Florida.  
15 herbarium specimens — Alaska and Washington.  
5 herbarium specimens — State of Washington.  
GEOLOGICAL SURVEY OF ALABAMA, University, Alabama.  
14 herbarium specimens — Alabama and Arkansas (exchange).  
GRAY HERBARIUM OF HARVARD UNIVERSITY, Cambridge, Mass.  
1 herbarium specimen — Cuba (exchange).  
GREENMAN, DR. J. M., Chicago, Illinois.  
2 herbarium specimens *Maxillaria*.  
HALL, MRS. HERMAN J., Chicago, Illinois.  
Living plant of Ginseng in full ripe fruit — Michigan.  
Illustration of Ginseng — Saugatuck, Michigan.  
HARRIS, WILLIAM, Hope Botanical Garden, Kingston, Jamaica, British West Indies.  
2 herbarium specimens — Jamaica.  
HELLER, A. A., Reno, Nevada.  
4 herbarium specimens *Compositæ*.  
HERBARIUM BOISSIER, Geneva, Switzerland.  
3 drawings and photographs of type plants *Pedilanthus* — Mexico.  
HUNGARIAN NATIONAL MUSEUM, Budapest, Austria-Hungary.  
109 herbarium specimens — Hungary (exchange).  
HYNES, J. A., Chicago, Illinois.  
1 Coumarin from *Prunus Mahaleb*.  
Flowers of *Hibiscus Sabdariffa*.  
Hat ornaments of *Lycopodium* — Germany.  
2 grass and sedge hat ornaments — Germany.  
16 economic specimens.  
*Rhamnus Frangula* — bark *Boldoa fragrans* — leaves *Astragalus gummifer* — gum.  
JOHNSON, FRANK W., Chicago, Illinois.  
67 herbarium specimens — Illinois and Indiana.  
KEW GARDENS, Kew, England.  
114 herbarium specimens (exchange).



LANSING, O. E., JR., Chicago, Illinois.

26 herbarium specimens — Indiana.

1 composite bur ornament — Chicago market.

MILLSPAUGH, DR. C. F., Chicago, Illinois.

Economic specimens — *Achras Sapota* — fruit model, crude gum and refined gum — Mexico.

Economic specimens — *Achras Sapota* — Latex — Guatemala.

16 herbarium specimens — Maywood, Illinois.

28 herbarium specimens — Palos, Illinois.

5 herbarium specimens — Chicago, Illinois.

53 herbarium specimens — Wisconsin.

2 herbarium specimens — Michigan.

Seeds of *Tropæolum majus* — Chicago, Illinois.

2 herbarium specimens — Wisconsin.

Fresh fruits of *Tropæolum majus* — Ephraim, Wisconsin.

Cane made of stalk *Verbascum Thapsus* — Ephraim, Wisconsin.

22 herbarium specimens — Wisconsin and Illinois.

Economic specimens: *Myristica fragrans* — nutmegs from Chicago market.

MISSOURI BOTANICAL GARDEN, St. Louis, Missouri.

2 photographs of book illustrations (exchange).

1 herbarium specimen of *Pedilanthus Finckii* — St. Louis, Missouri (exchange).

1 photograph of *Pedilanthus Finckii* — St. Louis, Missouri (exchange).

1 herbarium specimen — St. Louis, Missouri (exchange).

Leaves of *Vanilla planifolia* (exchange).

648 herbarium specimens (exchange).

MORSE, C. G., & CO., San Francisco, California.

Fruits of *Tumion californicum* — California.

NEW YORK BOTANICAL GARDEN, New York City.

Illustration of *Scirpus floccosus* — Cuba (exchange).

695 herbarium specimens *Pedilanthus* — West Indies (exchange).

1 herbarium specimen — Porto Rico (exchange).

94 herbarium specimens — Jamaica (exchange).

301 herbarium specimens — West Indies (exchange).

3 herbarium specimens — West Indies (exchange).

9 herbarium specimens — West Indies (exchange).

1 herbarium specimen — Cuba (exchange).

1 herbarium specimen — New Mexico (exchange).

5 herbarium specimens — Cuba and Florida (exchange).

PACIFIC IMPROVEMENT CO., Del Monte, California.

24 economic specimens logs and dry fruits — California.

PARISH, S. B., San Bernardino, California.

1 herbarium specimen *Chamæsyce* — California.

SHERFF, E. E., Chicago, Illinois.

7 illustrations and descriptions.

8 herbarium specimens — United States and Canada.

SMITH, HURON H., Chicago, Illinois.

10 herbarium specimens — Illinois.

42 herbarium specimens — Indiana.

13 medicinal roots, etc. — Illinois.

UNITED STATES DEPARTMENT OF AGRICULTURE, Division of Plants,  
Washington, D. C.

19 herbarium specimens — Mongolia and Siberia (exchange).

UNITED STATES NATIONAL HERBARIUM, Washington, D. C.

19 herbarium specimens — United States, Central America and Philippines  
(exchange).

UNIVERSITY OF PENNSYLVANIA, Botanical Garden, Philadelphia, Pa.

91 herbarium specimens — United States.

WURZLOW, E. C., Houma, Louisiana.

9 herbarium specimens — Louisiana.

## DEPARTMENT OF GEOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AMHERST COLLEGE, Amherst, Massachusetts.

Skull and jaws of *Stenomylus gracilis* — Nebraska.

ARMOUR SANDPAPER WORKS, Chicago.

6 specimens abrasive powders.

BETHLEHEM STEEL COMPANY, South Bethlehem, Pennsylvania.

Nickel steel shavings from armour plate — South Bethlehem, Pa.

BIDDLE HARDWARE COMPANY, Philadelphia, Pennsylvania.

Propeller of Monel metal.

BÖHM, JULIUS, Vienna, Austria.

1 specimen Tepl meteorite — Bohemia (exchange).

1 specimen St. Germain meteorite — France (exchange).

BRADEN COPPER COMPANY, Rancagua, Chile.

225 specimens copper ore — Rancagua, Chile.

BRITISH SCHOOL OF ARCHÆOLOGY IN EGYPT, London, England.

5 specimens building stones of Memphis, Egypt — Memphis, Egypt.

CHALMERS, W. J., Chicago.

2 gold nuggets — California.

Quantity silver nuggets — Lake Superior.

COLLINS, P., Chicago.

3 specimens gem obsidian.

1 specimen obsidian in matrix — Near Reno, Nevada.

DICKEY CLAY MANUFACTURING CO., W. S., Kansas City, Missouri.

400 pound mass fire clay.

1 brick made from same — Versailles, Missouri.

DIXON CRUCIBLE COMPANY, THE JAS., Jersey City, New Jersey.

Collection illustrating the uses of graphite — Jersey City, New Jersey.

DOMINION MARBLE COMPANY, THE, Montreal, Canada.

4 polished slabs of marble — Quebec, Canada.

DUMONT, DR. T. A., Dumont, Iowa.

10 specimens silver ores — San Bernardino County, California.

EGYPTIAN GEOLOGICAL SURVEY, Cairo, Egypt.

1 specimen El Nakhla meteorite — El Nakhla, Egypt (exchange).

FIELD MUSEUM OF NATURAL HISTORY.

Collected by B. Laufer:

1 polished specimen of opicalcite — Region of the Upper Huang-Ho,  
Kansu Province, China.

Collected by E. S. Riggs:

1 specimen of Loup Fork sandstone — Agate, Nebraska.

Collected by R. D. Salisbury:

4 specimens obsidian nodules — Patagonia.

1 specimen diamondiferous sand — Brazil.

Collected by A. W. Slocum:

182 specimens invertebrate fossils.

5 specimens brown coal — Little Traverse Bay, Michigan.

Purchases:

1 Etched slab of the Chinautla meteorite.

Pickens County meteorite — Pickens County, Georgia.

1 specimen pollucite — Buckfield, Maine.

1 specimen St. Michel meteorite — St. Michel, Finland.

Davis Mountains meteorite — Toyah, Texas.

Modeled by B. E. Dahlgren:

Branch with leaves and fruit of ginkgo — Washington, D. C.

FOOTE MINERAL COMPANY, Philadelphia, Pennsylvania.

1 specimen hopeite — Rhodesia (exchange).

1 specimen hinsdalite — Colorado (exchange).

1 specimen hulsite — Alaska (exchange).

GEORGIA MARBLE COMPANY, Tate, Georgia.

6 slabs Georgia marble — Georgia.

GILES & NIELSEN NICKEL WORKS, Troy, New York.

2 specimens nickel plate.

GOETZ BROTHERS, New Albany, Indiana.

1 specimen pulverized silica for paint — New Albany, Indiana.

HEATH & MILLIGAN MANUFACTURING COMPANY, Chicago.

5 specimens buhr stones.

8 specimens pigments.

JOHNS-MANVILLE COMPANY, H. W., Chicago.

19 specimens of asbestos products.

JOHNSTON, W. M., Chicago.

1 specimen gold ore — Animas Forks, Colorado.

1 specimen tetrahedrite.

1 specimen rhodonite — San Juan County, Colorado.

KILBOURN, SILAS, Chicago.

2 specimens marl — Compos Lake, Florida.

KINRADE, J. J., San Francisco, California.

1 specimen diopside.

1 specimen obsidian — California.

MISSOURI, KANSAS & TEXAS RAILROAD, St. Louis, Missouri.

2 specimens burned clay ballast and raw clay — Tebbetts, Missouri.

MACKIN, MRS. C. F., Chicago.

1 polished geode — near Charlevoix, Michigan.

MARSH, C. H., Marshfield, Oregon.

980 specimens agate and jasper — Oregon.

MARTIN, F. E., Chicago.

1 specimen lead ore.

1 specimen lead and zinc ore — Hardin County, Illinois.

- MORONEY, JOHN J., Chicago.  
1 specimen diatomite.  
1 specimen kaolin — Mexico.
- MURPHY, CHRISTOPHER, Chicago.  
2 specimens mercury ore — Cinnabar, Arizona.  
2 specimens cerussite — Wardner, Idaho.  
2 specimens pyromorphite — Wardner, Idaho.
- NARRAWAY, J. E., Ottawa, Canada.  
1 fossil trilobite — Mechanicsville, Canada (exchange).
- NICHOLAS, FRANCIS E., New York City.  
14 specimens showing alteration of pyrite to hematite — Copete Mine, Sonora, Mexico.
- OLIVER IRON MINING COMPANY, Coleraine, Minnesota.  
10 specimens iron ores and concentrates — Coleraine, Minnesota.
- PEABODY, F. S., Chicago.  
Tibia of Mastodon — Du Page County, Illinois.
- PIERCE, HENRY B., Golconda, Illinois.  
3 specimens transparent fluorite — Golconda, Illinois.
- PLUMAS AMALGAMATED MINES COMPANY, San Francisco, California.  
2 specimens gold ore — Soda Creek, California.
- RENNE, D. S., Verona, Illinois.  
2 specimens clay — Walker, Lane County, Oregon.
- RICHARDS, A. G., Albany, Wyoming.  
1 specimen allanite — Albany, Wyoming.
- ROSENBERGER, J. L., Chicago, Illinois.  
47 specimens copper ores — Butte, Montana, and Lake Linden, Michigan.  
7 specimens various minerals.
- SCHROTT, FRED, Salt Lake City, Utah.  
2 specimens gold ore.  
1 specimen country rock — High Grade Camp, Modoc County, California.
- SMITH, HURON H., Chicago, Illinois.  
25 specimens opal and jasper pebbles — Oregon and California.
- SOSNOVEC, V., St. Louis, Missouri.  
Quartz geode — St. Louis, Missouri.  
3 specimens flint — St. Clair County, Illinois.  
4 specimens chert concretions — St. Louis, Missouri.
- SOUTHERN RAILWAY COMPANY, Land & Industrial Dept., Washington, D. C.  
6 specimens clays.  
1 specimen silica — Southern States.
- UNION OIL COMPANY OF CALIFORNIA, Chicago, Illinois.  
1 specimen petroleum.  
1 specimen asphalt — Sunset District, California.
- UNITED STATES NATIONAL MUSEUM, Washington, D. C.  
1 section Perryville meteorite — Perryville, Missouri (exchange).
- UNIVERSITY OF CALIFORNIA, Berkeley, California.  
Skeleton of *Canis diurus* — Los Angeles, California (exchange).
- VERMONT MARBLE COMPANY, Proctor, Vermont.  
13 polished slabs of Vermont marble — Proctor, Vermont.

WARSAW CO-OPERATIVE ASSOCIATION, Warsaw, Illinois.

1 specimen ferruginous shale — Warsaw, Illinois.

## DEPARTMENT OF ZOÖLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE STATED.)

ALFARO, DR. A., San Jose, Costa Rica.

3 snout beetles — Rio Higueron, Taboga, Guanacaste, Costa Rica.

350 fishes — Pacific side of Costa Rica.

3 reptiles — Pacific side of Costa Rica.

AMERICAN MUSEUM OF NATURAL HISTORY, New York City.

65 specimens of mammals — Alaska, Siberia, Mexico, South America (exchange).

AYER, EDWARD E., Chicago.

1 Mallard Drake (albino) — Kankakee River, Illinois.

BARNES, JUDGE R. M., Lacon, Illinois.

1 Trumpeter Swan.

1 Trumpeter Swan — Eastern United States.

BEATY, WILBUR L., Chicago.

1 Mountain Rat Nest — Butte, Montana.

BORDEN, JOHN, Chicago.

1 Mallard (albino).

1 Cardinal Grosbeak (albino) — Illinois.

BROWN, LYLE E., Chicago.

1 Herring Gull — Jackson Park, Chicago.

DEUBLER, L., Chicago.

1 Mantispa.

1 beetle — Edgebrook, Illinois.

5 bird lice — Sheldon, Illinois.

DEVLIN, MRS. J., Chicago.

4 beetles — Costa Rica, Central America.

DOWD, MRS. LYDIA, Chicago.

1 American Bittern.

DUNNING, JERRY, Olive Branch, Illinois.

1 Cormorant — Olive Branch, Illinois.

FAIRCHILD, ELIJAH S., Chicago.

1 spider — Chicago, Illinois.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by M. P. Anderson:

86 mammals — Eastern Peru.

173 birds — Eastern Peru.

2 snakes — Eastern Peru.

1 lizard — Eastern Peru.

173 bird skins — Peru, South America.

1 bumblebee

2 beetles

6 scorpions

5 reptiles

10 fishes

} —Boa Vista (Rio Bronco), Brazil.

} — Brazil.

Collected by M. P. Anderson and R. H. Becker:

540 bird skins	}	— State of Amazonas, Brazil.
51 mammal skins		
61 mammal skulls		

Collected by R. H. Becker:

104 bird skins	}	— Amazonas, Brazil.
57 mammals (skins and skulls)		
4 skulls only		
442 bird skins	}	— Eastern Brazil.
85 mammals (skins and skulls)		
14 odd skulls		
13 bats	}	— Eastern Brazil.
5 frogs		
1 lizard		
1 snake	}	— Amazon River, Brazil.
1 tarantula		
1 beetle		

Collected by C. Brandler:

1 Musk Rat — Jackson Park, Chicago.

Collected by C. B. Cory.

1 bug	}	— Ballard Lake, Wisconsin.
1 dragonfly		
2 butterflies		
4 grasshoppers		
6 flies		
11 bees, wasps, etc.		
12 beetles	}	— Lake Bucktoban, Vilas County, Wisconsin.
5 shells		

Collected by J. Friesser:

4 moose (skins and 3 skeletons) skins, 1 pair moose horns, 5 Alaska porcupines (with skulls and 2 skeletons), 8 red squirrels, 9 varying hares (with skulls and 1 skeleton) — Kenai Peninsula, Alaska.

2 bugs, 5 grasshoppers, 5 beetles — Bozeman, Montana.

3 beetles, 20 flies, 1 ant, 3 bugs — Skilak Lake, Alaska.

Collected by W. J. Gerhard:

221 dragonflies, grasshoppers, bugs, butterflies, moths, beetles, flies, bees, wasps, and parasites — Northern Illinois and Northern Indiana.

Collected by E. N. Gueret:

2 Sanderling — Lake Michigan, South Chicago.

Collected by William Heim:

1 Kangaroo Rat — Baird, Shasta County, California.

140 fishes — Monterey, California.

85 fishes — Long Beach, California.

9 boxes mounted fish — Long Beach, California.

Salmon eggs — Baird, California.

1 keg of gravel — Baird, California.

Collected by S. E. Meek and S. F. Hildebrand:

17,000 specimens of fishes (550 species) — Panama.

Collected by W. H. Osgood and M. P. Anderson:

202 mammals, 208 birds, 2 lizards — Peru.

2 centipedes — Balsas, Peru.



Collected by L. L. Walters:

- 41 mammals (skins and skulls), 3 birds — Salamonina, Jay County, Indiana.
- 56 birds, 3 mammals — Cook County, Illinois.

Purchases:

- 1 skink (lizard)—Fruitland Park, Lake County, Florida.
- 6 eggs, nest and 5 eggs, nest and 4 eggs.
- 1 cow buffalo.
- 591 Humming-bird skins.
- 37 moths, 40 butterflies — Key Islands, Dutch East Indies.
- 2 Rough-legged Hawks.
- 3 deer, 1 Coati, 1 Tayra (skins and skulls)—Venezuela.
- 156 Humming-birds, 79 miscellaneous species, 42 Humming-bird nests — Venezuela.
- 20 Murres Eggs.
- 83 Arctic birds, 65 eggs, 4 nests, photographs and samples of moss — Behring Sea, Alaska and Siberia.
- 6 Paradise Birds — German New Guinea.

FRIESSER, J., Chicago.

- 1 beetle — Willow Springs, Illinois.
- 3 bugs, 6 beetles — Holland, Michigan.

GAULT, B. T., Glen Ellyn, Illinois.

- 3 bats — Cayenne, French Guiana.

GAUMER, G. F., Tacubaya, D. F., Mexico.

- 2 Pigmy Opossums.

GIBNEY, J., Chicago.

- 1 millipede — Chicago, Illinois.

GUERET, E. N., Chicago.

- 1 bird parasite (bird louse)—Worth, Illinois.

HANCOCK, DR. J. L., Chicago.

- 4 bugs — Wheaton, Illinois.

HEFTER, CHARLES, Kankakee, Illinois.

- 1 starfish — Gulf of Mexico.

INDIANA UNIVERSITY MUSEUM, Bloomington, Indiana.

- 123 fishes — Guatemala.

LEWIS, A. B., Chicago.

- 1 Cassowary Egg — North Coast of Dutch New Guinea.
- 1 Dugong Skull — German New Guinea.

LILJEBLAD, E., Chicago.

- 40 bugs, mantispas, beetles, flies, bees, etc.—Northern Illinois and Northern Indiana.

- 3 bugs — Mt. Vernon, Ohio.

MILLSPAUGH, DR. C. F., Chicago.

- 4 moths — Ephraim, Wisconsin.

MUNZNER, H., Chicago.

- 1 bug, 2 beetles, 1 wasp, 3 spiders — Northern Illinois.

NETHERCOT, MRS. ARTHUR, Chicago.

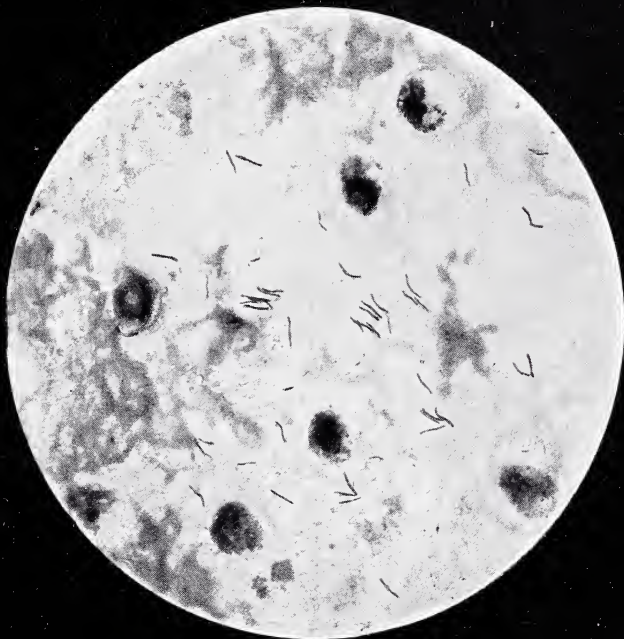
- 1 scorpion, 1 Trapdoor Spider's Nest — San Remo, Italy.

NICKERSON, V. C., Kankakee, Illinois.

- Specimens of scale insects on branch of cherry — Kankakee, Illinois.

PHELPS, MRS. W. L., Chicago.

- 1 Gar-fish.



HIGHLY MAGNIFIED

274033

Bacteria (stained red) among epithelial cells (stained blue).

## GERMS OF TUBERCULOSIS.

(*Bacterium tuberculosis*).

Tubercular affections in man and animals are caused by organisms such as the above. They may attack any organ in the body or all of them. Cattle are especially liable to become affected with tuberculosis; thus dairy products are a prolific source of infection. Outside of the body the bacillus may live for many weeks. It is, however, killed by a few hours exposure to direct sunlight.

Reproduced from nature.

REPRODUCTION OF A MICROSCOPE FIELD SHOWING BACTERIA,



PORTER, A. F., Decorah, Iowa.

68 bugs, beetles, bees and wasps — Iowa, West Indies, South America and Africa.

PRAY, LEON L., Chicago.

1 *Synaptomys cooperi* — Dowagiac, Michigan.

1 bee, 2 bugs, 2 flies, 7 beetles — Dowagiac, Michigan.

SISSON, O. U., Chicago.

1 Gar-fish.

STEELE, G. F., Chicago.

1 Caribou head, 1 White-tail Deer head, 1 Mountain Sheep head, 1

Black-tail Deer head, 3 Goat heads, 1 Buffalo head, 5 fish, 1 Jew

fish, 2 pelicans, 1 Great Blue Heron, 1 Snowy Owl, 1 Great Horned

Owl, 1 Barn Owl, 1 Saw-whet Owl, 1 Royal Tern, 3 California Quail — California and Michigan.

STUDEBAKER, J. M., South Bend, Indiana.

2 American Elk (male and female) — Glenwood Springs, Colorado.

THOMPSON, S. L., Winnipeg, Manitoba.

3 bugs, 1 butterfly, 2 bumblebees — Winnipeg, Manitoba.

UNITED STATES BIOLOGICAL SURVEY, Washington, D. C.

1 *Viscaccia*, 1 *Euneomys* — Peru (exchange).

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

200 specimens of fishes (84 species) (exchange).

WARREN, J. B., Chicago.

1 Manatee (skeleton) — Texas.

WILLIAMSON, E. B., Bluffton, Indiana.

1 Short-eared Owl — Bluffton, Indiana.

1 Sparrow Hawk — Bluffton, Indiana.

1 Great Horned Owl — Bluffton, Indiana.

1 Horned Grebe — Bluffton, Indiana.

1 Red-tailed Hawk — Bluffton, Indiana.

1 Carolina Rail — Bluffton, Indiana.

1 Red-shouldered Hawk — Bluffton, Indiana.

1 Marsh Hawk.

WINCHESTER, MRS. NINA, Santa Cruz, Philippine Islands.

30 shells — Santa Cruz, Davao District, Moro Province, Philippine Islands.

WOLCOTT, A. B., Chicago.

54 bugs, beetles, flies, bees, wasps, etc. — Northern Indiana and Northern Illinois.

7 millipedes, 155 vials of spiders — Northern Indiana and Northern Illinois.

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134 negatives of landscapes, seascapes, general views, etc.— Brazil.

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144 negatives of seascapes and landscapes — Alaska.

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1,100 negatives of landscapes, portraits of natives, industries, etc.— New South Wales.

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168 negatives of landscapes, general views, portraits, etc.— Arizona.

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12 portraits of plants, landscapes, etc.

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100 miscellaneous photographs — Papua.

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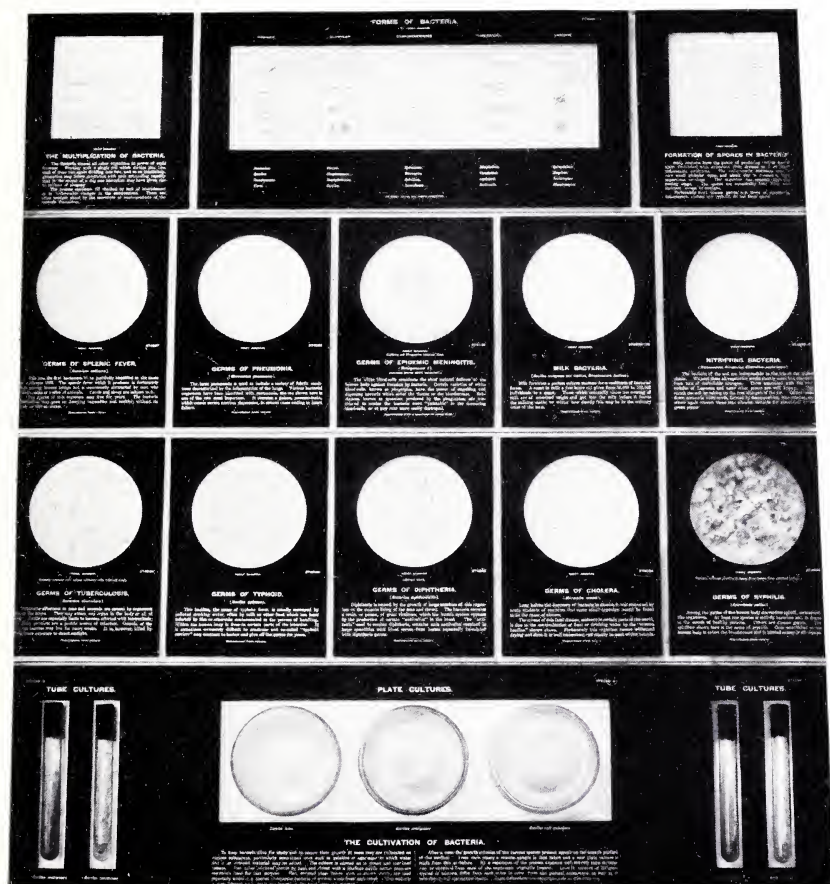
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WESTERN AUSTRALIA. GEOLOGICAL SURVEY, Perth, West Australia . . . . .	5
WESTERN AUSTRALIAN MUSEUM AND ART GALLERY, Perth, West Australia . . . . .	1
WESTERN PENNSYLVANIA ENGINEERS' SOCIETY, Pittsburgh, Pennsylvania . . . . .	2
WEULE, K., Leipzig, Germany . . . . .	3
WHITE, I. C., Morgantown, West Virginia . . . . .	1
WIESBADEN. NASSAUISCHER VEREIN FÜR NATURKUNDE, Wiesbaden, Germany . . . . .	1
WILLE, N., Christiania, Norway . . . . .	6
WILLIAMS COLLEGE, Williamstown, Massachusetts . . . . .	2
WILLISTON, S. W., Chicago . . . . .	2
WILSON ORNITHOLOGICAL CLUB, Oberlin, Ohio . . . . .	1
WINCHELL, ALEXANDER N., Minneapolis, Minnesota . . . . .	5
WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY, Madison, Wisconsin . . . . .	3

WISCONSIN NATURAL HISTORY SOCIETY, Madison, Wisconsin . . .	1
WISCONSIN STATE BOARD OF FORESTRY, Madison, Wisconsin . . .	6
WISCONSIN STATE HISTORICAL SOCIETY, Madison, Wisconsin . . .	6
WISCONSIN STATE HORTICULTURAL SOCIETY, Madison, Wisconsin . . .	2
WISCONSIN UNIVERSITY, Madison, Wisconsin . . . . .	15
WISTAR INSTITUTE OF ANATOMY AND BIOLOGY, Philadelphia, . . .	10
WOODWARD, ROBERT B., Brooklyn, New York . . . . .	1
WRIGHT, ALBERT H., Ithaca, New York . . . . .	6
WORCESTER FREE PUBLIC LIBRARY, Worcester, Massachusetts . . .	1
WÜLFING, E. A., Heidelberg, Germany . . . . .	5
WÜRTEMBERG. VEREIN FÜR VATERLÄNDISCHE NATURKUNDE, Würtemberg, Germany . . . . .	1
WYOMING AGRICULTURAL EXPERIMENT STATION, Laramie, Wyoming . . . . .	6
WYOMING STATE GEOLOGICAL SURVEY, Cheyenne, Wyoming . . .	1
YALE UNIVERSITY, New Haven, Connecticut . . . . .	136
ZIMANYI, KARL, Budapest, Hungary . . . . .	5
ZÜRICH. BOTANISCHES MUSEUM DER UNIVERSITÄT, Zürich, Switzerland . . . . .	2
ZÜRICH. GEOGRAPHISCH-ETHNOGRAPHISCHE GESELLSCHAFT, Zürich, Switzerland . . . . .	1
ZÜRICH. NATURFORSCHENDE GESELLSCHAFT Zürich, Switzerland . .	1





BRONZE COLANDER, CHINA, EARLY ARCHAIC PERIOD.  
Mrs. T. B. Blackstone Expedition.





## ARTICLES OF INCORPORATION

## STATE OF ILLINOIS.

DEPARTMENT OF STATE.

WILLIAM H. HINRICHSSEN, *Secretary of State.*

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

Now, therefore, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of the State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSSEN,  
*Secretary of State.*

[SEAL.]

TO HON. WILLIAM H. HINRICHSSEN,

SECRETARY OF STATE.

SIR:

We, the undersigned citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archaeology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(Signed),

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohlsaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, George F. Bissell, John R. Walsh, Chas. Fitzsimons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS }  
COOK COUNTY } ss.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

[SEAL.]

G. R. MITCHELL,  
NOTARY PUBLIC, COOK COUNTY, ILL.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.

## AMENDED BY-LAWS.

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(FEBRUARY 10, 1913).

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## ARTICLE I.

## MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

*First.*—Free admittance for the member and family, to the Museum on any day.

*Second.*—Ten tickets every year, admitting the bearer to the Museum on pay days.

*Third.*—A copy of all publications of the Museum when requested.

*Fourth.*—Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons or Honorary Members shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars (\$500.00), at any one time, shall, upon the unanimous vote of the Board, become a Life Member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SEC. 6. Honorary Members shall be chosen by the Board from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

## ARTICLE II.

### BOARD OF TRUSTEES.

SECTION 1. The Board of Trustees shall consist of fifteen members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled at a regular meeting of the Board, upon the nomination of the Executive Committee made at a preceding regular meeting, by a majority vote of the members of the Board present.

SEC. 2. Regular meetings of the Board shall be held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

## ARTICLE III.

### HONORARY TRUSTEES.

SECTION 1. As a mark of respect, and in appreciation of services performed for the Institution, those Trustees who by reason of inability, on account of change of residence, or for other cause, or from indisposition to serve longer in such capacity, shall resign their place upon the Board, may be elected, by a majority of those present at any regular meeting of the Board, an Honorary Trustee for life. Such Honorary Trustee will receive notice of all meetings of the Board of Trustees, whether regular or special, and will be expected to be present at all such meetings and participate in the deliberations thereof, but an Honorary Trustee shall not have the right to vote.

## ARTICLE IV.

### OFFICERS.

SECTION 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.



## ARTICLE V.

## THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation, except as hereinafter provided. He shall make disbursements only upon warrants drawn by the Director and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrants shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed. It shall be no part of the duties of the Treasurer to see that the warrants have been issued in conformity with such vouchers.

SEC. 2. The securities and muniments of title belonging to the corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer, except as hereinafter provided. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SEC. 3. The Treasurer shall give bond in such amount, and with such sureties, as shall be approved by the Board of Trustees.

SEC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director, and the Chairman of the Administration Committee. All vouchers executed for expenditures for the construction or reconstruction of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

SEC. 5. The Harris Trust and Savings Bank of Chicago shall be Custodian of "The N. W. Harris Public School Extension of Field Museum" fund. The Bank shall make disbursements only upon warrants drawn by the Curator of "The N. W. Harris Public School Extension of Field Museum of Natural History" and countersigned by the Auditor of Field Museum of Natural History. In the absence or inability of the said officers, warrants may be signed by such officers as shall be authorized by special resolution of the Board of Trustees of Field Museum of Natural History. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved by the officers above designated. It shall be no part of the duties of the Bank to see that the warrants have been issued in conformity with such vouchers.

## ARTICLE VI.

## THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of the Museum, and shall control the operations of the insti-



tution, subject to the authority of the Board of Trustees and its Committees. The Director shall be the official medium of communication between the Board, or its Committees, and the scientific staff and maintenance force.

SEC. 2. There shall be four scientific departments of the Museum — Anthropology, Botany, Geology and Zoölogy, each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SEC. 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month. At the Annual Meeting, the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

## ARTICLE VII.

### AUDITOR.

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board. He shall certify to the correctness of all vouchers for the expenditure of the money of the corporation.

## ARTICLE VIII.

### COMMITTEES.

SECTION 1. There shall be five Committees as follows: Finance, Building, Auditing, Administration and Executive.

SEC. 2. The Finance and Auditing Committees shall each consist of three members, and the Building and Administration Committees shall each consist of five members. All members of these four Committees shall be elected by ballot by the Board at the Annual Meeting, and shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairman by the order in which the members are named in the respective Committee; the first member named shall be Chairman, the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession to the Chairmanship being in this order in the event of the absence or disability of the Chairman.

SEC. 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Administration Committee, the Chairman of the Auditing Committee, and two other members of the Board to be elected by ballot at the Annual Meeting.

SEC. 4. Four members shall constitute a quorum of the Executive Committee; three members shall constitute a quorum of the Administration Committee, and in all other standing Committees, two members shall constitute a quorum. In the

event that, owing to the absence or inability of members, a quorum of the regularly elected members cannot be present at any meeting of any Committee, then the Chairman thereof, or his successor, as herein provided, may summon any member of the Board of Trustees to act in place of the absentee.

SEC. 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest funds, subject to the approval of the Board.

SEC. 6. The Building Committee shall have supervision of the construction, reconstruction, and extension of any and all buildings used for Museum purposes.

SEC. 7. The Executive Committee shall be called together from time to time as the Chairman may consider necessary, or as he may be requested to do by three members of the Committee, to act upon such matters affecting the administration of the Museum as cannot await consideration at the Regular Monthly Meetings of the Board of Trustees. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommendations as to the expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the respective Committees shall be considered as authorized to make the expenditures detailed therein. No increase in the expenditures under any items of the Budget shall be made, except by authority of the Board of Trustees, but the Executive Committee shall have authority, in cases of emergency, to expend a further total sum not exceeding two thousand dollars in any one month.

SEC. 8. The Administration Committee shall have general supervision of the affairs of the Museum. The Committee shall hold one meeting each month with the Director at the Museum within a week preceding each Monthly Meeting of the Board of Trustees.

SEC. 9. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SEC. 10. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 11. The President shall be ex officio a member of all Committees and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

## ARTICLE IX.

### NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board, each year a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, the Administration Committee, and the Auditing Committee, and for two members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting and voted upon at the following Annual Meeting in January.

## ARTICLE X.

SECTION 1. Whenever the word "Museum" is employed in the By-Laws of the Corporation, it shall be taken to mean the building in which the Museum as an Institution is located and operated, the material exhibited, the material in study collections, or in storage, furniture, fixtures, cases, tools, records, books, and all appurtenances of the Institution, and the workings, researches, installations, expenditures, field work, laboratories, library publications, lecture courses, and all scientific and maintenance activities.

SEC. 2. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.



MODEL ILLUSTRATING PANEL—RETREATING SYSTEM OF COAL MINING.



## HONORARY MEMBERS.

EDWARD E. AYER	STANLEY McCORMICK
HARLOW N. HIGINBOTHAM	ROBERT F. CUMMINGS
CHARLES B. CORY	MRS. TIMOTHY B. BLACKSTONE
NORMAN W. HARRIS	
DECEASED.	
GEORGE M. PULLMAN	
MARY D. STURGES	

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## PATRONS.

ALLISON V. ARMOUR	GEORGE MANIERRE
JOSEPH N. FIELD	JOHN S. MILLER
ERNEST R. GRAHAM	JOHN BARTON PAYNE
NORMAN W. HARRIS	FREDERICK W. PUTNAM
VERNON SHAW KENNEDY	FREDERICK J. V. SKIFF
WILLARD A. SMITH	
DECEASED.	
DANIEL H. BURNHAM	WILLIAM I. BUCHANAN
EDWIN WALKER	



## CORPORATE MEMBERS.

ADAMS, GEORGE E.	HIGINBOTHAM, H. N.
ALDIS, OWEN F.	HUTCHINSON, CHARLES L.
ARMOUR, ALLISON V.	JONES, ARTHUR B.
AYER, EDWARD E.	KENNEDY, VERNON SHAW
BARTLETT A. C.	KOHLSAAT, HERMAN H.
BLACK, JOHN C.	LATHROP, BRYAN
BLAIR, WATSON F.	McCORMICK, CYRUS H.
BLATCHFORD, ELIPHALET W.	MANIERRE, GEORGE
BUTLER, EDWARD B.	MILLER, JOHN S.
CHALMERS, W. J.	MITCHELL, JOHN J.
CHATFIELD-TAYLOR, H. C.	PAYNE, JOHN BARTON
CLARK, JOHN M.	PECK, FERD. W.
CRANE, RICHARD T.	PORTER, GEORGE F.
EASTMAN, SIDNEY C.	PUTNAM, FREDERICK W.
ELLSWORTH, JAMES W.	REAM, NORMAN B.
FIELD, JOSEPH N.	RYERSON, MARTIN A.
FIELD, STANLEY	SKIFF, FREDERICK J. V.
GAGE, LYMAN J.	SMITH, BYRON L.
GETTY, HENRY H.	SMITH, WILLARD A.
GRAHAM, ERNEST R.	SPRAGUE, A. A.
GUNSAULUS, FRANK W.	SPRAGUE, A. A., 2D.
GUNTHER, C. F.	STONE, MELVILLE E.
HARRIS, NORMAN W.	
HEAD, FRANKLIN H.	

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## DECEASED.

ARMOUR, PHILIP D.	McCAGG, E. B.
BAKER, WILLIAM T.	McCLURG, A. C.
BISSEL, GEORGE F.	McNALLY, ANDREW
BUCHANAN, W. I.	PATTERSON, ROBERT W.
BUCKINGHAM, EBENEZER	PEARCE, J. IRVING
BURNHAM, DANIEL H.	PETERSON, ANDREW
CRAWFORD, ANDREW	PULLMAN, GEORGE M.
CURTIS, WILLIAM E.	SCHNEIDER, GEORGE
DAVIS, GEORGE R.	SCOTT, JAMES W.
FITZSIMONS, CHARLES	STOCKTON, JOSEPH
HALE, WILLIAM E.	WALKER, EDWIN
HARPER, WILLIAM R.	WALLER, R. A.
HATCH, AZEL F.	WALSH, JOHN R.
JACKSON, HUNTINGTON W.	WILLIAMS, NORMAN
LEITER, L. Z.	

## LIFE MEMBERS.

ADAMS, GEORGE E.	JOHNSON, FRANK S.
ALDIS, OWEN F.	JOHNSON, MRS. ELIZABETH AYER
	JONES, ARTHUR B.
BARRETT, MRS. A. D.	KEEP, CHAUNCEY
BARRETT, ROBERT L.	KING, FRANCIS
BARTLETT, A. C.	KING, JAMES C.
BLACKSTONE, MRS. TIMOTHY B.	KIRK, WALTER RADCLIFFE
BLAINE, MRS. EMMONS	
BLAIR, CHAUNCEY J.	LAWSON, VICTOR F.
BLAIR, HENRY A.	
BLAIR, WATSON F.	McCORMICK, MRS.
BOOTH, W. VERNON	McCORMICK, CYRUS H.
BUTLER, EDWARD B.	McCORMICK, HAROLD F.
BYLLESBY, H. M.	MacVEAGH, FRANKLIN
	MASON, WILLIAM S.
CARTON, L. A.	MITCHELL, J. J.
CHALMERS, WILLIAM J.	
CRANE, CHARLES RICHARD	NEWELL, A. B.
CRANE, RICHARD T.	
CUMMINGS, D. MARK	ORR, ROBERT M.
DEERING, CHARLES	PAM, MAX
DELANO, FREDERIC A.	PIKE, EUGENE S.
DICK, ALBERT BLAKE	PORTER, GEORGE F.
DRAKE, TRACY C.	PORTER, H. H., JR.
FARWELL, WALTER	REAM, MRS. CAROLINE P.
FAY, C. N.	REAM, NORMAN B.
FIELD, STANLEY	REVELL, ALEX. H.
FULLER, WILLIAM A.	ROSENWALD, JULIUS
	RUSSELL, EDMUND A.
GARTZ, A. F.	RYERSON, MRS. CARRIE H.
GRISCOM, CLEMENT A.	RYERSON, MARTIN A.
GROMMES, JOHN B.	
	SCHLESINGER, LEOPOLD
HAMILL, ERNEST A.	SINGER, C. G.
HILL, LOUIS W.	SMITH, BYRON L.
HOROWITZ, L. J.	SMITH, ORSON
HOXIE, MRS. JOHN A.	SPRAGUE, A. A.
HUGHITT, MARVIN	SPRAGUE, A. A., 2D.
HUTCHINSON, C. L.	STURGES, GEORGE
INGALLS, M. E.	THORNE, GEORGE R.
ISHAM, MRS. KATHERINE	
PORTER.	WILLARD, ALONZO J.

## ANNUAL MEMBERS.

ADAMS, CYRUS H.  
ADAMS, MILWARD  
ALLERTON, ROBERT H.  
ARMOUR, GEORGE A.

BAILEY, EDWARD P.  
BECKER, A. G.  
BILLINGS, C. K. G.  
BILLINGS, DR. FRANK  
BIRKHOFF, GEORGE, JR.  
BOAL, CHARLES T.  
BROWN, WILLIAM L.  
BURLEY, CLARENCE A.

COMSTOCK, WILLIAM C.  
CONOVER, CHARLES H.  
COONLEY-WARD, MRS. L. A.  
CORWITH, CHARLES R.  
COWAN, W. P.  
CUDAHY, JOHN  
CUMMINGS, E. A.  
CURTIS, D. H.

DAY, A. M.  
DEERING, JAMES  
DILLMAN, L. M.

EISENDRATH, W. N.

FAIR, R. M.  
FORGAN, JAMES B.  
FORSYTH, ROBERT  
FRANK, HENRY L.  
FULLER, O. F.  
FÜRST, CONRAD

GAYLORD, FREDERIC  
GLESSNER, J. J.  
GOODRICH, A. W.  
GORDON, EDWARD K.  
GREY, CHARLES F.  
GREY, WILLIAM L.  
GURLEY, W. W.

HARRIS, GEORGE B.  
HARRIS, JOHN F.  
HASKELL, FREDERICK T.  
HERTLE, LOUIS  
HIBBARD, WILLIAM G., JR.  
HITCHCOCK, R. M.  
HOLT, GEORGE H.  
HOPKINS, JOHN P.

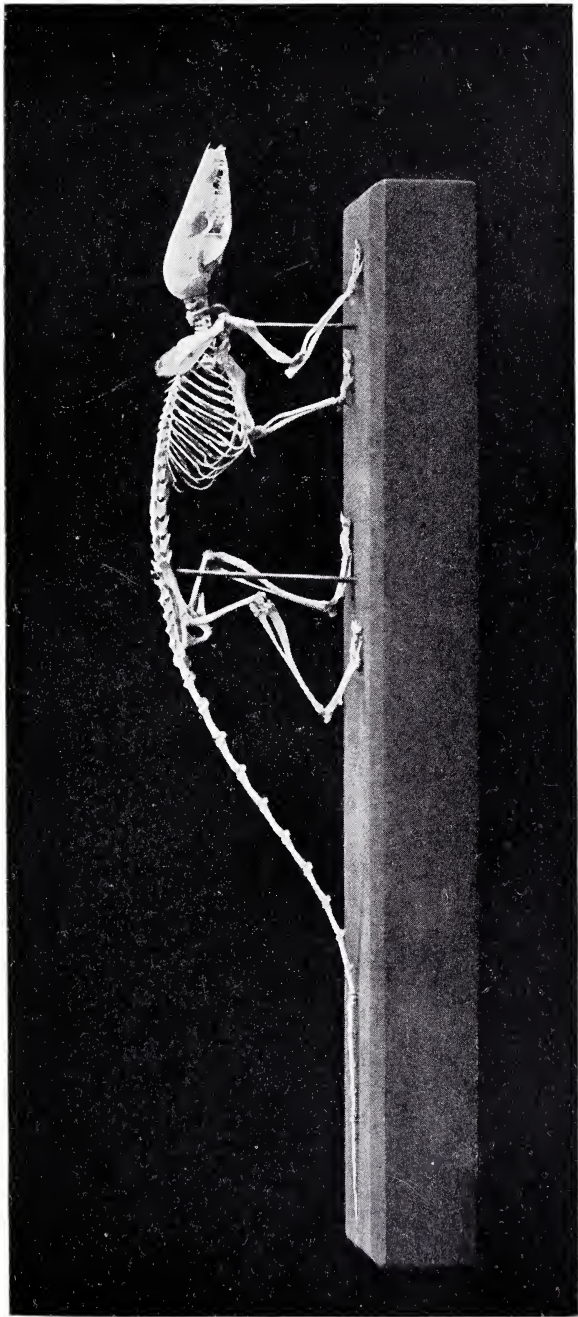
INSULL, SAMUEL

JENKINS, GEORGE H.  
JONES, J. S.

KEEFER, LOUIS  
KEITH, W. SCOTT  
KIMBALL, EUGENE S.  
KIMBALL, MRS. MARK

LAMB, FRANK H.  
LAY, A. TRACY  
LEE, BLEWETT  
LEIGH, EDWARD B.  
LINCOLN, ROBERT T.  
LINN, W. R.  
LOGAN, F. G.  
LORD, J. B.  
LOWDEN, FRANK O.  
LYTTON, HENRY C.

McCREA, W. S.  
McWILLIAMS, LAFAYETTE  
MacFARLAND, HENRY J.  
MAGEE, HENRY W.  
MANSON, WILLIAM  
MANSURE, E. L.  
MAYER, LEVY  
MERRYWEATHER, GEORGE  
MEYER, MRS. M. A.  
MILLER, CHARLES P.  
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MULLIKEN, A. H.



SKELETON OF *Canolestes obscurus*, THOMAS (ABOUT  $\frac{2}{3}$  NATURAL SIZE), FROM SOUTH AMERICA.  
The specimen is unique.



NATHAN, ADOLPH  
NOLAN, JOHN H.  
NORTON, O. W.

OEHNE, THEODORE  
ORB, JOHN A.  
OSBORN, HENRY A.

PALMER, PERCIVAL B.  
PARKER, FRANCIS W.  
PEARSON, EUGENE H.  
PINKERTON, W. A.  
PORTER, WASHINGTON

RIPLEY, E. P.  
ROSENBAUM, JOSEPH  
ROSENFELD, MRS. MAURICE  
RUNNELLS, J. S.

SCHMIDT, DR. O. L.  
SCHWARTZ, G. A.  
SEIPP, MRS. C.  
SHEDD, JOHN G.  
SHORTALL, JOHN L.

SKINNER, THE MISSES  
SOPER, JAMES P.  
SOUTHWELL, H. E.  
SPENCE, MRS. ELIZABETH E.  
SPOOR, J. A.  
STOCKTON, JOHN T.  
STUART, ROBERT

TEMPLETON, THOMAS  
TOBEY, FRANK B.

UIHLEIN, EDWARD G.

WACKER, CHARLES H.  
WALKER, JAMES R.  
WALKER, WILLIAM B.  
WALLER, EDWARD C.  
WEBSTER, GEORGE H.  
WHITE, A. STAMFORD  
WHITEHEAD, W. M.  
WILSON, MRS. E. C.  
WILSON, M. H.  
WOODCOCK, LINDSAY T.

---

DECEASED.

BANGA, DR. HENRY  
BARRELL, JAMES  
DEERING, WILLIAM

HORNER, ISAAC  
LEFENS, THIES J.  
MORRIS, EDWARD  
SELZ, MORRIS



















PUBLICATIONS  
OF  
FIELD MUSEUM OF NATURAL  
HISTORY

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REPORT SERIES

VOLUME IV

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CHICAGO, U. S. A.

1910-1914



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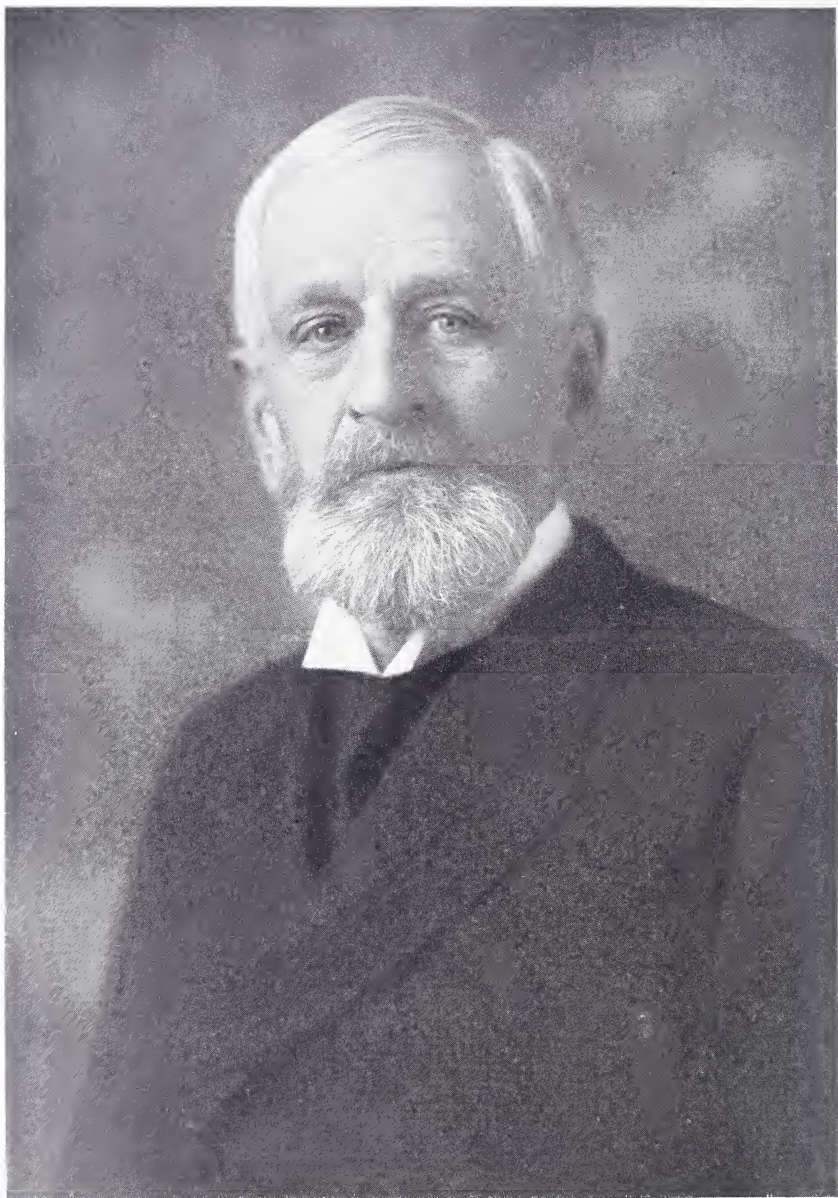
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THE LATE JOSEPH N. FIELD,  
A Benefactor of the Museum.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 181.

REPORT SERIES.

VOL. IV, No. 5.

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# ANNUAL REPORT OF THE DIRECTOR

TO THE  
BOARD OF TRUSTEES

FOR THE YEAR 1914.



CHICAGO, U. S. A.

January, 1915.



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ALBERT B. LEWIS, *Assistant Curator of African and Melanesian Ethnology.*

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WILLIAM J. GERHARD, *Assistant Curator Division of Entomology.*

EDMOND N. GUERET, *Assistant Curator Division of Osteology.*

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### THE LIBRARY.

ELSIE LIPPINCOTT, *Librarian.*

### THE N. W. HARRIS PUBLIC SCHOOL EXTENSION.

S. C. SIMMS, *Curator.*

\* Deceased July 6, 1914.

## ANNUAL REPORT OF THE DIRECTOR.

1914

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To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1914.

The Twentieth Anniversary of the foundation of the Museum was ushered in with an intimation that it was necessary to curtail certain activities in the Institution, in view of the default in payment of interest on certain investments held in the Endowment Fund. There is satisfaction in announcing, however, that this condition is only temporary, for later in the year it was ascertained that the security for the investments referred to was ample to protect the Institution as to both principal and interest. The chief reduction in expenditure was effected by the temporary abandonment of work in the Modeling Sections of the Departments of Anthropology and Botany. It was felt that the postponement of this work would not seriously affect the plans of the Departments involved, and that the resumption of operations might be undertaken at any future time without detriment to the work in hand.

Probably the most important event of the year was the tender to the Board of Trustees of a site for the new Museum building in the reclaimed area south of Grant Park by the South Park Commissioners. It is confidently anticipated that ground will be broken on this site before the date of the next report. Already the greater part of the steel necessary for the construction of the building is on the ground, and of the marble necessary for the exterior of the structure more than one-half has been quarried and cut.

In view of the necessity of retrenchment in the matter of maintenance expenses, it was deemed advisable to discontinue for the present the two lecture courses hitherto given on Saturday afternoons in March and April, and October and November. The fact that there is no hall in the present building to accommodate these lectures, and the further fact that the only suitable auditorium with the requisite seating capacity is situated some seven miles from the Institution, seems to justify the temporary abandonment of this means of public instruction.

The publication of a series of picture postal cards, portraying the various objects and groups installed in the Museum, was inaugurated during the year. The sale of the cards has been encouraging, for over fifty thousand have been disposed of, although they have only been offered for sale a few months. A second series representing forty-two objects and groups in the collections will shortly be published.

The acceptance by Assistant Curator Osgood of the invitation to serve on a United States Government Commission to study and make recommendations regarding the management of the fur-seal herd on the Pribiloff Islands, deprived the Department of Zoölogy of his services for over half of the year. Leave of absence was granted to Curator Dorsey of the Department of Anthropology for approximately one year. At least two months of Dr. Dorsey's time, however, will be occupied in an ethnologic survey of British India in behalf of the Museum. The remainder of the leave granted is for a personal undertaking.

The death of Byron L. Smith, Treasurer of the Museum, in March has to be recorded. Mr. Smith had faithfully served the Museum as Treasurer since its foundation, and as an officer of the Board, a friend of the Institution, and a high-minded public-spirited citizen of Chicago, his loss will be keenly felt. Mr. Solomon A. Smith was elected Treasurer to succeed his father. The death of Mr. Joseph N. Field, a Patron of the Museum, has also to be chronicled, and as a memorial for his generosity to the Museum, the Board of Trustees by resolution have named the hall in which the South Sea Islands ethnological material is installed the "Joseph N. Field Hall." The death of Dr. Seth Eugene Meek in July of this year was a shock to his associates, and is an irreparable loss to the Department of Zoölogy, of which he was Assistant Curator for seventeen years. Dr. Meek's highly valuable services on behalf of the Institution were recognized by the Board of Trustees in formal resolutions adopted on the occasion of his death.

Mr. Carl E. Akeley in performance of his contract completed and installed during the month of December a group of African Buffalo consisting of five individuals. This group which is installed in the South Court keeps fully up to the high standard of excellence exhibited by those previously produced by him. A brief description of this addition to the Museum groups is made elsewhere in this report.

References elsewhere indicate that the activities in the Institution, more especially in the progress of installation, have been fully maintained during the year under review.



THE LATE BYRON L. SMITH,  
Treasurer of the Museum Corporation since its foundation.





**MAINTENANCE.**—The cost of maintenance for the year amounted to approximately \$135,000, which was \$13,000 less than the amount authorized by the Board of Trustees. The total amount expended for all purposes was \$198,600 being \$38,500 less than the previous year. The difference between the cost of maintenance and the actual amount expended is accounted for by special appropriations for the purchase of collections. The necessary repairs to the building were performed by the regular maintenance force.

**PUBLICATIONS.**—The number of publications issued during the year was seven. These seven comprise parts of five volumes, details of which follow:

- Pub. 173.—Report Series, Vol. IV, No. 4. Annual Report of the Director to the Board of Trustees for the year 1913. 89 pages, 14 half-tones. Edition 2500.
- Pub. 174.—Zoölogical Series, Vol. X, No. 10. An Annotated List of Fishes known to occur in the Fresh Water of Costa Rica. By S. E. Meek. 34 pages. Edition 1500.
- Pub. 175.—Zoölogical Series, Vol. X, No. 11. Four New Mammals from Venezuela. By W. H. Osgood. 7 pages. Edition 1500.
- Pub. 176.—Zoölogical Series, Vol. X, No. 12. Mammals of an Expedition across Northern Peru. By W. H. Osgood. 43 pages. Edition 1500.
- Pub. 177.—Anthropological Series, Vol. XIII, No. 2. Chinese Clay Figures. Part I—Prolegomena on the History of Defensive Armor. By Berthold Laufer. 245 pages, 64 plates, and 55 text-figures. Edition 1500.
- Pub. 178.—Geological Series, Vol. V, No. 1. New Meteorites. By O. C. Farrington. 14 pages, 6 half-tones. Edition 1500.
- Pub. 179.—Botanical Series, Vol. II, No. 10. Contributions to North American Euphorbiaceæ—V. By C. F. Millspaugh. 15 pages. Edition 1500.

#### NAMES ON MAILING LIST

Domestic . . . . .	626
Foreign . . . . .	<u>704</u>
	1,328

#### DISTRIBUTION OF FOREIGN EXCHANGES

Argentine Republic . . . . .	12	Bulgaria . . . . .	1
Australia . . . . .	33	Canada . . . . .	29
Austria-Hungary . . . . .	32	Cape Colony . . . . .	6
Belgium . . . . .	18	Ceylon . . . . .	3
Borneo . . . . .	1	Chile . . . . .	2
Brazil . . . . .	9	China . . . . .	2
British East Africa . . . . .	2	Colombia . . . . .	2
British Guiana . . . . .	2	Costa Rica . . . . .	4



## DISTRIBUTION OF FOREIGN EXCHANGES — CONTINUED

Denmark . . . . .	9	Natal . . . . .	3
East Africa . . . . .	1	Netherlands . . . . .	20
Ecuador . . . . .	1	New Zealand . . . . .	7
Egypt . . . . .	2	Norway . . . . .	8
France . . . . .	56	Peru . . . . .	2
Fiji Islands . . . . .	1	Portugal . . . . .	5
Finland . . . . .	2	Rhodesia . . . . .	2
Germany . . . . .	138	Roumania . . . . .	1
Great Britain . . . . .	120	Russia . . . . .	18
Greece . . . . .	2	Salvador . . . . .	1
Guatemala . . . . .	1	Sicily . . . . .	3
India . . . . .	17	Spain . . . . .	7
Italy . . . . .	38	Straits Settlements . . . . .	1
Jamaica . . . . .	2	Sweden . . . . .	15
Japan . . . . .	9	Switzerland . . . . .	23
Java . . . . .	4	Tasmania . . . . .	3
Liberia . . . . .	1	Transvaal . . . . .	3
Malta . . . . .	1	Uruguay . . . . .	1
Mexico . . . . .	18	West Indies . . . . .	3

## DISTRIBUTION OF PUBLICATIONS (FOREIGN) BY SERIES

Anthropological . . . . .	291	Ichthyological . . . . .	165
Botanical . . . . .	373	Ornithological . . . . .	206
Entomological . . . . .	160	Report . . . . .	704
Geological . . . . .	360	Zoological . . . . .	306

## DISTRIBUTION OF DOMESTIC EXCHANGES

Alabama . . . . .	2	Nebraska . . . . .	7
Arkansas . . . . .	1	Nevada . . . . .	2
California . . . . .	29	New Hampshire . . . . .	4
Colorado . . . . .	11	New Jersey . . . . .	15
Connecticut . . . . .	21	New Mexico . . . . .	2
Delaware . . . . .	2	New York . . . . .	87
District of Columbia . . . . .	66	North Carolina . . . . .	6
Florida . . . . .	3	North Dakota . . . . .	2
Idaho . . . . .	1	Ohio . . . . .	20
Illinois . . . . .	69	Oklahoma . . . . .	3
Indiana . . . . .	16	Oregon . . . . .	1
Iowa . . . . .	15	Pennsylvania . . . . .	37
Kansas . . . . .	6	Rhode Island . . . . .	5
Kentucky . . . . .	3	South Carolina . . . . .	2
Louisiana . . . . .	4	South Dakota . . . . .	2
Maine . . . . .	7	Tennessee . . . . .	2
Maryland . . . . .	9	Texas . . . . .	2
Massachusetts . . . . .	65	Utah . . . . .	1
Michigan . . . . .	13	Vermont . . . . .	4
Minnesota . . . . .	9	Virginia . . . . .	4
Mississippi . . . . .	4	Washington . . . . .	6
Missouri . . . . .	11	West Virginia . . . . .	6
Montana . . . . .	2	Wisconsin . . . . .	17

Wyoming . . . . .	2	Philippine Islands . . . . .	3
Cuba . . . . .	3	Porto Rico . . . . .	1
Hawaii . . . . .	5		

DISTRIBUTION OF PUBLICATIONS (DOMESTIC) BY SERIES

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Botanical . . . . .	304	Ornithological . . . . .	160
Geological . . . . .	313	Report . . . . .	626
Historical . . . . .	161	Zoölogical . . . . .	266

THE LIBRARY.—The Library contains 64,875 books and pamphlets distributed as follows:

General Library . . . . .	42,656
Department of Anthropology . . . . .	3,189
Department of Botany . . . . .	6,718
Department of Geology . . . . .	9,181
Department of Zoölogy . . . . .	3,131

64,875

There were added during the year 2,639 books and pamphlets. The principal growth has been through gifts and interchange of the Museum's publications with individuals and institutions. Among the important purchases were complete sets to date of the Transactions of the Asiatic Society of Japan; Journal für Ornithologie; Ornithologische Monatsberichte; and Ornis. Through the continued interest of friends a number of valuable publications were received. Mrs. Frank W. Barker, Chicago, presented ten parts of a rare work "The Acropolis of Ancon." Dr. Berthold Laufer, Chicago, a copy of "Epigraphische Denkmäler aus China, Part first" recently published by Dr. Laufer and Otto Franke. Publications were also received from Mrs. F. H. Chalfant of Pittsburgh; Prof. Henry F. Osborn of New York; Sir Thomas W. Northcote of London; Judge Curtis H. Lindley of San Francisco; and Prof. Alexander W. Evans of New Haven. The courtesy of several contemporary institutions enabled the Library to complete sets of their publications. The more noteworthy were: American Geographical Society New York City; British Museum London; Cambridge University, Cambridge, England; Kentucky Geological Survey Frankfort; South Park Commission, Chicago; Museum of Natural History, Marseilles, France; Royal Asiatic Society, Shanghai; Royal Botanical Garden, Edinburgh, Scotland; Royal Museum of Bohemia, Prag; Senckenbergische Naturforschende Gesellschaft, Frankfort-am-Main; Zoölogical Institute, Strassburg; Royal Society of Tasmania, Hobart; National University of La Plata, Buenos Aires. The books and periodicals bound during the year number 504. As routine work permits, the opportunity is being improved to make a

more careful and extended analysis of many sets of periodicals. There have been written and filed in the catalogues 21,000 cards. Twelve installments of the John Crerar Library library cards have been received and alphabetically arranged in the catalogue. During the summer months the Stack Room was thoroughly cleaned, and a complete rearrangement of the books made. A discarded exhibition case was fitted with shelves and converted into a temporary bookcase.

DEPARTMENTAL CATALOGUING, INVENTORYING, AND LABELING.—The catalogue cards prepared by the Department of Anthropology during the year numbered 2,825, distributed as follows: Archæology, 401; Melanesian Ethnology, 1,374; Asiatic Ethnology, 1,050. These cards with the addition of 1,885 from the preceding year make a total of 4,710 that have been entered in the inventory books of the Department. Of the cards relating to American archæology some have not as yet been turned over to the cataloguer, being retained for further reference in connection with the installation of the material which they record. The number of accessions for the year is 26, of which 25 have been recorded in the inventory. The volumes of inventories number 37. The labels printed for the Department during the year number 3,045, of which 621 were for the Melanesian division, with the addition of 135 prepared for the Fiji collection by Assistant Curator Cole, 22 for American Ethnology and over 2,000 for the Division of Asiatic Ethnology. The photographic prints prepared for the Department were classified and arranged in albums, of which 11 volumes were added to the series, 9 containing photographs of Chinese and 2 of Tibetan specimens.

The Curator of Botany reports the preparation of 650 labels. Of these all that have been printed have been placed against the objects installed. The complete card catalogue of all the collectors and geographic regions represented by specimens installed, containing over 12,000 cards, has been finished and arranged in a new and readily referable steel index case. This catalogue is unique and of the greatest value not only to students of the world of plants, but to the efficiency of the Department itself. The work of inventorying the specimens organized has been kept up to date, 7,521 entries having been made during the year, making the total number of entries 412,486.

The material catalogued in the Department of Geology during the year included 590 mineral specimens, 355 economic specimens, and 364 miscellaneous. A total of 2,138 labels was prepared during the year, of which 891 have been printed and distributed. The most important series of these was that for the meteorite collection, the number made for that purpose being 1,003. These labels show for each specimen the classification of the meteorite, the locality of the fall or find, date



EAST AFRICAN BUFFALO (*Syncerus caffer roddiffii*).  
C. E. Akeley, Taxidermist.





of fall or find, the weight of the specimen and its catalogue number. A large number of miscellaneous labels in addition were prepared relating mostly to material received during the year. Several of these labels were descriptive. Some of the series thus labeled include the asphalt collection, a part of the petroleum collection, the collection of Japanese volcanic material, the amber collection, a series of mammoth and mastodon teeth, and about 200 miscellaneous specimens of minerals. The descriptive labels in Higinbotham Hall were provided with white frames corresponding in color to the interior of the cases in order to give a more attractive appearance to the installation.

In the Department of Zoölogy cataloguing and labeling of specimens was continued as usual. In the various inventory books all new material received from Museum expeditions during the year was promptly entered as soon as the specimens were identified, and also card-catalogued. Some rearrangement in the mammal and bird collection has been made, and the revision of old labels continued. The work of rearranging and transferring the exhibition collection of shells to new cases was commenced and about 2,500 specimens were placed on newly prepared tablets and a new arrangement of labeling adopted. Under the supervision of Assistant Curator Gerhard the entire time of one assistant was devoted to this work. The preparation of labels for the shells to be installed in the new cases is now progressing. The entire collection of humming-birds, including about 400 species and subspecies, was rearranged in new trays and properly card-catalogued, and labels for specimens of reptiles, fishes, and crustaceans, placed on exhibition during the year, have been prepared and installed. The large mammal skins stored in the basement of the Museum have been rearranged, listed, and catalogued in such a way that they are now readily accessible for quick reference.

The following table shows the work performed on catalogues and the inventorying accomplished:

	No. of Record Books	Total No. of Entries to Dec. 31, 1914	Entries During 1914	Total No. of Cards Written
Department of Anthropology . . .	37	131,240	4,710	133,606
Department of Botany . . . .	57	412,486	7,521	.....
Department of Geology . . . .	21	129,345	1,309	7,705
Department of Zoölogy . . . .	40	94,160	2,255	30,045
The Library . . . . .	14	96,890	1,025	185,692
Section of Photography . . . .	15	110,827	3,599	.....

ACCESSIONS.—The majority of accessions credited to the Department of Anthropology for the year have been made possible through the generosity of friends. The collection of classical archæology has



been increased by two gifts of Mr. Edward E. Ayer — a large Etruscan bronze vessel with chain handle and a small variegated glass bottle from Egypt. Two other Italian bronze cistas of the third century B. C., acquired by Mr. Ayer in Rome, were purchased by the Museum. These specimens belong to a type now very scarce, and seldom, if ever, offered for sale on the market. A diorite statuette of a woman from Egypt, of great artistic beauty, likewise obtained by Mr. Ayer, was secured through exchange. The section of North American archæology received from Mr. F. Schrott a flaked knife-blade of chert, and from Mr. Clarence B. Moore of Philadelphia an assortment of archæological material. Fifty arrowheads and two stone axes from Rock Hall, Maryland, were secured through exchange with Mr. George C. Roberts. To Mr. Homer E. Sargent the Department is indebted for an ancient gold ring from Mexico which has been added to the exhibits of American gold jewelry in Higinbotham Hall. Dr. W. S. Lowe, Phoenix, Arizona, presented several sections of cane stem, some wrapped up with a small cotton fabric, found under a ledge of rock in the Camelback Mountains, fifteen miles northeast of Phoenix, and to have served as an offering. American ethnology has been enriched by a gift from Mr. Richard G. Ellis, consisting of a rawhide lariat, wooden bow with skin case, a stone celt, and a stone disc; and by a gift from Mrs. Frank A. Devlin of Chicago, comprising three finely carved cups of pod from Costa Rica (modern) and two prehistoric pottery vessels from the same locality. The following acquisitions from Assistant Curator Owen's recent expedition to Arizona have been added: three finished two-faced Navaho blankets, and one in the loom during the process of working, two-thirds being finished; specimens of yarn, and implements used in weaving. Mr. Cleaver Warden, Carlton, Oklahoma, presented the Museum with a peyote outfit of the Arapaho. Mrs. Frank W. Barker of Chicago presented the Museum with a miscellaneous lot of 17 objects from Italy, Egypt, India, northwest coast of North America, Hawaii, and Micronesia. The following gifts were received by the section of Asiatic Ethnology: a rhinoceros-horn presented by Mr. F. W. Kaldenberg of New York; a Japanese gold piece (10 yen), and a Japanese rectangular silver coin from Mrs. T. B. Blackstone; three printing-blocks from the Examination Halls of Nanking from the Curator; an interesting mariner's compass, enclosed in a copper case, from Mr. Thomas Mason. Three paintings representing polo matches, one album with 25 flower-pieces painted on silk, and another containing an Atlas of Hunan Province with sixteen hand-painted colored maps, were presented by Dr. John R. Taylor, in recognition of services rendered him in the identification of his collection

of Chinese paintings. The most important gift accessioned during the year are two exquisite silk-embroidered hangings presented by Dr. F. W. Gunsaulus, who has always evinced a keen and generous interest in the work of the Museum. These specimens were made in the Imperial Atelier for use in the Palace, and are classical examples of the marvelous skill attained by the Chinese in art needlework. They have been placed on exhibition in special wall-cases in Hall 45. The Museum is further indebted to Dr. Gunsaulus for two Japanese water-colors, framed, one illustrating the pounding of tea-leaves preparatory to the tea-ceremonies, the other showing a woman engaged in painting. Three notable acquisitions for the Chinese Collection were effected by purchase. The generosity of Mrs. T. B. Blackstone enabled the Museum to secure a famous collection of ancient Chinese coins, 690 in number. This numismatic collection is of intrinsic scientific value, including, as it does, many rare and unique ancient specimens; particularly it abounds in those earliest forms of currency, bronze-cast sham-implements, like knives, axes, spades, bells, etc., which are of specific archæological interest in permitting a study of the development of these ancient utensils. Mr. Chalfant, the collector, unfortunately met a premature death on January 14th, at the age of 52; his collection of ancient bone carvings, reference to which was made last year, and the coin collection in question, remain the most enduring monument of his fruitful activity and his serious aspirations. Mr. Chalfant had spent the last seven years of his life on the decipherment of the inscriptions on these bone carvings and left a voluminous manuscript on this work in two quarto-volumes. Mrs. Chalfant has placed this manuscript with others in the trust of Associate Curator Laufer, with the request that he take charge of the publication thereof. Two nephrite tablets from an imperial jade book, the one inscribed in Manchu, the other engraved with a pair of dragons, were purchased from Mr. Hackett. Through the services of Mr. W. W. Simpson, an American missionary in Taochow, Kansu, China, the Museum succeeded in obtaining the seal and grant conferred upon the Taochow Lama Temple by the Emperor K'ang-hi in 1713. When Dr. Laufer secured the remaining spoils of this temple at the time of his sojourn at Taochow in 1910, it was impossible to get hold of these documents, as the abbot of the monastery is not permitted to part with them without the sanction of the high Church Dignitaries of Lhasa. Word was accordingly left with Mr. Simpson, requesting him to arrange for this transaction, which is now felicitously concluded. The large, square seal is carved from wood surmounted by the figure of a standing lion which serves as a handle; the K'ang-hi date-mark is engraved on the top. The grant is written

out in Tibetan on imperial yellow silk, which has dragons and other designs woven in, and is stamped with numerous seals. These unique objects naturally are of principal value to the Museum, inasmuch as they furnish substantial evidence for the fact that all treasures in its possession from the Lama Temple in question were indeed turned out during the K'ang-hi era (1662-1722) and prior to the year 1713.

In the Department of Botany considerable valuable material for exhibition purposes has been received. The Chicago Varnish Company has presented a very complete and valuable collection of 344 characteristic specimens of natural varnish gums, many of them the largest, clearest, and most typical examples of their kind known. These have been fully labeled and installed in two cases, accompanied by tubes of varnishes made from each class of gum exhibited. From the Philippine Bureau of Education a series of 147 typical fibers and objects utilizing the same have been received and installed among other objects belonging to the various families of plants they illustrate. Dr. Laufer has presented the Department with several characteristic specimens of "brick Tea" and of paper and raw material illustrating Chinese paper made from Derge roots. The U. S. Bureau of Plant Industry has sent in 168 specimens of crude drug substances that will serve to fill many gaps in the systematic exhibitions of plant products. The U. S. Forest Products Laboratory has contributed, in exchange, 44 examples of wood-paper pulps and papers made therefrom. The Forest Economist of India has presented 19 valuable forest products of India that assist greatly in the representation of the economics of several plant families, and the Section of Modeling, during the last month of its labors, turned over 7 models of desmid species; 9 models of diatom species; a full-size reproduction of a leafy, fruiting branch of the Horsechestnut tree; a full-size reproduction of a flowering twig of the same; a full-size reproduction of a pandanus fruit, a chocolate fruit, cakes of manufactured chocolate, and several sections of the fruit of Connarus. The important additions to the herbarium during the past year comprise the following: The private herbarium of Mr. Geo. F. Curtiss, consisting of ferns of central North America, presented by Miss E. Curtiss; the private herbarium of Miss Carrie A. Reynolds, consisting of plants collected in northwestern North America, presented by herself; the private herbarium of Mr. C. W. Dusener, consisting of plants collected locally in Illinois and Indiana, presented by himself; and the following: Abbon, Mexico, 70; Adole, Mexico, 106; Arsene, Mexico, 689; Britton, Cowell & Shafer, Vieques Isl., 72; Britton and Shafer, Porto Rico, 217; Curacao, 51; Britton, Stevens & Hess, Porto Rico, 78; Broadway, Tobago, 56; Buchtien, Bolivia, 201; Cowles, northwestern North Amer-

ica, 1,240; Curtiss, Jamaica, 136; Elmer, Philippines, 863; Flora Exscicc. Austria-Hung., 310; Harris, Jamaica, 107; Heller, California, 169; Nevada, 242; Lansing, Illinois, 207; Macoun, Ontario, 48; Vancouver, 124; Millspaugh, Michigan, 68; Natal Botanical Gardens, South Africa, 101; Nicolas, Mexico, 120; Pennell, Gerardia, 56; Purpus, Mexico, 408; Huron Smith, Illinois, 160; Visher, South Dakota, 51; Tonduz, Costa Rica, 55; Wenzel, Philippine, 146; and Wood, Natal, 95.

	Added to Herbarium 1914.	Total now in Herbarium.
ALASKA:		
Coronation Island . . . . .	1	1
CANADA:		
British Columbia . . . . .	5	1,017
Nova Scotia . . . . .	5	382
Cape Breton Island . . . . .	1	28
Sable Island . . . . .	2	37
Ontario . . . . .	51	675
Prince Edward's Island . . . . .	1	12
Quebec . . . . .	36	181
Ungava . . . . .	2	62
Vancouver Island . . . . .	132	710
Newcastle Island . . . . .	3	3
Brandon Island . . . . .	1	1
Yukon . . . . .	1	70
UNITED STATES:		
Alabama . . . . .	4	1,337
American Plains . . . . .	7	219
Arizona . . . . .	6	9,448
Arkansas . . . . .	5	422
California . . . . .	186	24,040
Carolina, North . . . . .	17	4,574
Carolina, South . . . . .	22	1,035
Colorado . . . . .	6	11,787
Connecticut . . . . .	14	555
Dakota, South . . . . .	51	1,093
Delaware . . . . .	5	1,593
District of Columbia . . . . .	21	2,373
Florida . . . . .	23	20,716
Big Pine Key . . . . .	2	2
Georgia . . . . .	8	4,562
Illinois . . . . .	412	21,052
Indiana . . . . .	45	5,908
Iowa . . . . .	1	1,762
Kansas . . . . .	7	506
Louisiana . . . . .	14	1,296
Maryland . . . . .	28	1,107
Massachusetts . . . . .	62	3,184
Michigan . . . . .	72	4,003
Minnesota . . . . .	1	1,599
Missouri . . . . .	5	3,020



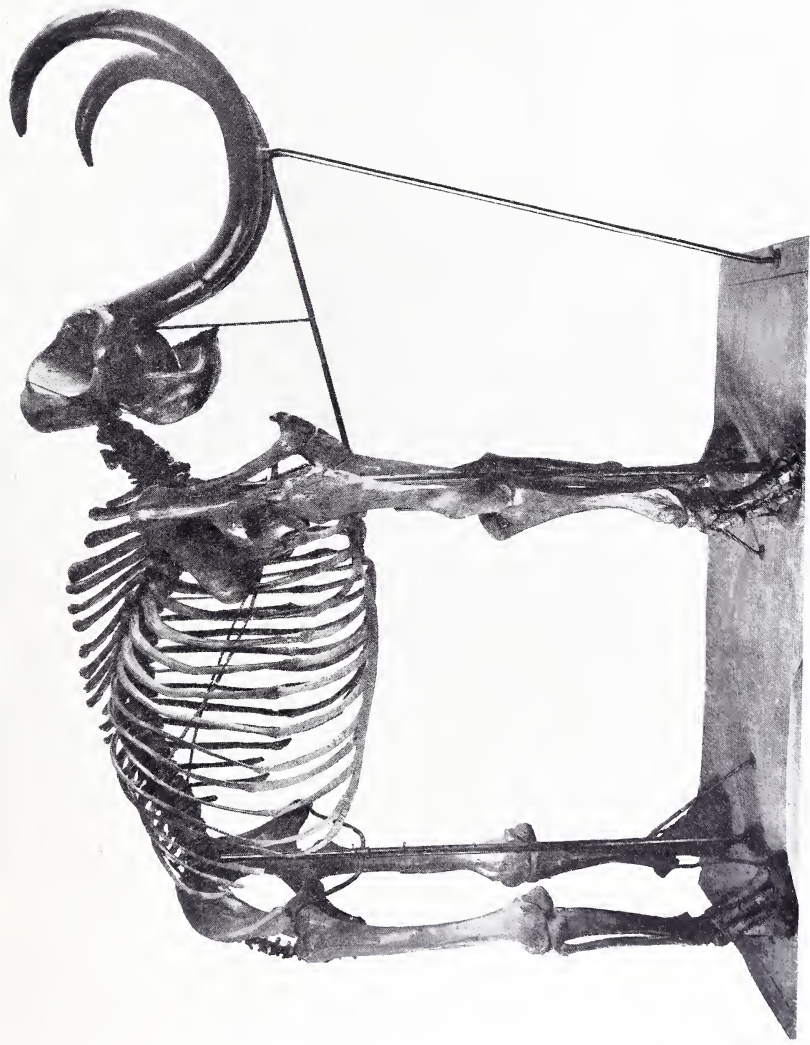
	Added to Herbarium 1914.	Total now in Herbarium.
<b>UNITED STATES:</b>		
Nebraska . . . . .	1	414
Nevada . . . . .	245	1,256
New Hampshire . . . . .	5	1,486
New Mexico . . . . .	8	2,961
New York . . . . .	11	6,057
Pennsylvania . . . . .	16	10,861
Rocky Mountains . . . . .	4	1,395
Tennessee . . . . .	5	1,457
Texas . . . . .	56	9,764
Virginia . . . . .	30	4,703
Vermont . . . . .	15	2,675
Wyoming . . . . .	1	930
<b>CENTRAL AMERICA:</b>		
Canal Zone . . . . .	2	53
Costa Rica . . . . .	59	611
Guatemala . . . . .	5	2,886
Honduras . . . . .	2	343
Mexico (in general) . . . . .	1,469	35,738
Yucatan . . . . .	1	4,691
Nicaragua . . . . .	4	92
Panama . . . . .	10	71
San Salvador . . . . .	1	24
<b>WEST INDIES:</b>		
Anegada . . . . .	3	26
<b>BAHAMAS:</b>		
Andros Island . . . . .	3	1,732
Crooked Islands . . . . .	4	335
Inagua . . . . .	3	443
Bermuda . . . . .	7	657
Cuba . . . . .	11	9,778
Hayti . . . . .	1	305
Jamaica . . . . .	308	7,388
Porto Rico . . . . .	586	4,586
Culebra Island . . . . .	1	221
Desecheo Island . . . . .	7	7
Mona Island . . . . .	24	24
Vieques Island . . . . .	75	75
St. Thomas . . . . .	1	621
Santo Domingo . . . . .	1	1,379
Tobago . . . . .	57	570
Trinidad . . . . .	4	482
<b>SOUTH AMERICA:</b>		
Bolivia . . . . .	202	3,715
Venezuela . . . . .	1	1,064
Curaçao Island . . . . .	51	93
Peru . . . . .	39	129
Colombia . . . . .	1	2,424
British Guiana . . . . .	4	75
Brazil . . . . .	3	513

	Added to Herbarium 1914.	Total now in Herbarium.
<b>EUROPE:</b>		
Austria-Hungary . . . . .	55	7,067
Bulgaria . . . . .	1	2
England . . . . .	2	681
France . . . . .	16	4,540
Germany . . . . .	33	7,131
Greece . . . . .	5	530
Italy . . . . .	9	2,500
Mediterranean Islands:		
Corsica . . . . .	2	54
Sardinia . . . . .	1	8
Sicily . . . . .	14	124
Poland . . . . .	1	49
Portugal . . . . .	3	14
Russia . . . . .	7	1,600
Roumania . . . . .	1	31
Servia . . . . .	1	125
Spain . . . . .	2	141
Switzerland . . . . .	1	2,615
<b>AFRICA:</b>		
Canary Islands . . . . .	1	47
South Africa . . . . .	16	1,259
Cape Colony . . . . .	3	84
Natal . . . . .	89	750
Zululand . . . . .	11	160
<b>ASIA:</b>		
Borneo . . . . .	1	8
China . . . . .	1	324
Mongolia . . . . .	1	2
India . . . . .	1	1,038
Java . . . . .	1	102
Siberia . . . . .	1	430
<b>OCEANIA:</b>		
Australia:		
New South Wales . . . . .	1	526
Victoria . . . . .	6	494
Sandwich Islands . . . . .	3	465
Horticultural . . . . .	28	2,650
Illustrations, Drawings, etc., mounted as herbarium sheets	233	1,245

In the Department of Geology a number of accessions have been received by gift, many of which are of unusual value. The most important of these is a skeleton of the American mammoth formerly belonging to the Chicago Academy of Sciences, which was presented through the generosity of Mr. George Manierre. This skeleton was, until recently, the only mounted skeleton of a mammoth on exhibition in America, and it still remains one of the most nearly complete and important. The skeleton was found in 1878 in Spokane County,



Washington. Owing to its fragile nature and the probability that it might not remain long in the present Museum building, it was decided not to remount the specimen at this time, and it has not, therefore, been placed on exhibition. A valuable collection of minerals, with some fossils, the whole numbering about 300 specimens, was received from Miss E. Curtiss. Many of these specimens were of exceptional beauty and rarity. A somewhat similar, though smaller, collection numbering 48 specimens was received from Harold Wegg. It was chiefly valuable for its series of Mazon Creek fossils. Two large specimens of fossil logs, collected by Prof. R. D. Salisbury on his recent trip to Patagonia, were received during the year and made an appreciated addition. From Mr. Charles Winston eight exceptionally fine specimens of Carboniferous plants from Pennsylvania and Rhode Island were received. Some of these were of importance as having been cotypes of Lesquereux and all are large and well-preserved specimens. Two excellent specimens of fossil glass sponge, *Hydnoceras bathense*, in group form were generously presented by the New York State Museum. An excellent specimen of fossil fish from Wyoming was presented by Mrs. E. F. Goodall. The skull of a Bison, found in an excavation near 67th Street, Chicago, was presented by Thomas Farley. This is one of few occurrences known showing the distribution of the buffalo in this vicinity. D. S. Renne, Verona, Illinois, presented two large specimens of septaria, which are interesting specimens of this type. From the Dolese & Shepard Company were received two excellent specimens of *Orthoceras* found near Chicago. Besides the above a number of specimens of economic interest were received through the kindness of donors. Among these may be mentioned six specimens of gold and silver ore from San Bernardino County, California, presented by Dr. T. A. Dumont; 27 examples of minerals and ores from Montana, presented by Mr. J. E. Strawn; 15 specimens of gold ore from the Bella Mañana Mine, Tlatlaya, Mexico, from William Brockway; 10 specimens illustrating the manufacture of tungsten lamps, from the General Electric Company; two specimens of platinum and gold ore from the Boss Gold Mining Company of Nevada; three specimens of vanadium ore from the American Vanadium Company; 46 specimens of asphalt and its products and two large photographs of Trinidad Lake, from the Barber Asphalt Company, and 11 specimens of coal tar and its products from the Barrett Manufacturing Company. Dr. F. C. Nicholas presented a series of instructive specimens, which represented ores and lavas of Sonora, Mexico, and Messrs. L. V. Kenkel and H. V. Guild about 150 specimens of fossils and minerals from Idaho. In response to a number of requests sent to producers of building stones and marbles,



SKELETON OF MAMMOTH (*Elephas Columbi*) FROM SOUTHERN WASHINGTON.  
Gift of Mr. George Manierre. (To be remounted.)



a number of cubes and marble slabs were added to the building stone collection, making it more representative than formerly. Twenty-one specimens were received from these donors. By exchange a number of important specimens were received, the most important being a large and complete skeleton of the European Cave Bear from Austria. This and a skull of the fossil whale (*Zeuglodon*) from Egypt were received from Dr. F. Krantz. From the University of California there was received by exchange a practically complete skeleton of the sabre-tooth Cat from the Rancho la Brea beds of California. From Grebel, Wendler & Company there was received a fine series of Brazilian phenacite crystals, numbering 21 specimens. From Mr. George S. Scott of New York City were received by exchange 14 specimens of various minerals; from Prof. H. B. North of Rutgers College, 8 specimens of pseudomorphs after marcasite; and from the Royal Ontario Museum, Toronto, three large polished specimens showing the occurrence of the silver and nickel ores of Cobalt, Ontario. By purchase the Bishop Canyon meteorite was obtained entire; also the Scott City meteorite, nearly complete, and a large etched section of the Mount Edith, Australia, meteorite. Other purchases included: 163 specimens showing varieties and modes of occurrence of German amber; an interesting series, numbering 42 specimens, showing products of the eruption of the volcano of Sakurajima, a specimen of a "bread crust" bomb in this series being of especial importance; a large specimen of *Orthoceras*, measuring six feet in length; a series of models of diamonds cut from the Cullinan diamond; and 11 teeth and two tusks of a young mastodon.

The Curator of Zoölogy reports that an important addition to the Entomological collection was received from Dr. William Barnes of Decatur, Illinois, who presented to the Museum a collection of about 3,500 moths, which are in fine condition and many of them will ultimately be used for the exhibition collection. Miss Elizabeth F. Curtiss also presented to the Museum a collection of butterflies containing some 1,700 specimens, which may supply some material for exhibition purposes. A rare species of Sphinx Moth (*Trogolegnum pseudambulyx*) from Mexico, a gift from Mr. B. Preston Clark of Boston, was new to the Museum collection. The mammals and birds received from Museum Expeditions were of much scientific value and contained several new forms, which are being studied and will be the subjects of papers now being prepared for publication. The most important donation received was that of 26 large mammals and 3 birds from East Africa, presented by Mr. Brent Altsheler of Louisville, Kentucky. The collection consisted of 3 Ostriches, 4 Impala Antelopes, 1 Hartebeest, 2 Waterbuck, 1 Wart Hog, 2 Elands, 1 Lioness, 3 Grant's Gazelle, 3



Oryx, 2 Dik Dik, 1 Klipspringer, 4 Gerenuk, 1 Buffalo, and 1 Jackal. Mr. E. B. Williamson of Bluffton, Indiana, presented a number of birds during the year, and his continued interest is much appreciated. Judge R. M. Barnes of Lacon, Illinois, presented a body of the rare Trumpeter Swan. An albino crow was purchased. The Osteological collection was enlarged by 445 skulls cleaned for the study collection, and 5 skeletons were prepared and installed in the exhibition collection.

EXPEDITIONS AND FIELD WORK.—At the beginning of the year the Museum had two zoölogical collectors in the field: Malcolm P. Anderson in Venezuela, and Robert H. Becker in Brazil. In January Mr. Anderson proceeded to Peru and worked in high altitudes in the Andes Mountains east of Chimbote, later going to Lake Junin (altitude 14,000 feet). After leaving Lake Junin May 7th, he spent a month collecting in the vicinity of San Ramon on the Rio Chanchamayo, and sailed for home early in June. While Mr. Anderson secured valuable material, the specimens were less in number than could have been expected, owing largely to a series of unfortunate accidents. In January, Mr. Becker proceeded from Rio de Janeiro, Brazil, to Lagoa Santa in the State of Minas Geraes, where he made an important collection of birds and mammals. He then proceeded up the Rio San Francisco to Barra, and from there pushed on up the Rio Preto to and beyond Formosa, a small native town in a very little known region in the interior of Brazil. This country has not been worked by collectors, and it is unfortunate that after surmounting difficulties in reaching there, his stay had to be limited to two weeks. Interesting mammals and birds were secured, some of which are new and will be the subject of a publication in due time. Coming down the Rio Preto on a raft, which he built, Mr. Becker reached Barra safely, and from there went on to Bahia and took a steamer to Trinidad, where he had been directed to secure material for a group of Oil Birds (*Steatornis caripensis*). The birds, eggs, nests, and accessory material were obtained, also photographs of the caves in which the birds live, and the group is now in process of construction.

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT.—A most encouraging feature of the work performed in the Department of Anthropology during the current year is that, despite the reduction of the force rendered necessary in January, the progress of installation has been fully maintained to a remarkable degree, and, in fact, the work in every line of activity has been pursued with energy and devotion. A total of 70 new cases has been placed on permanent exhibition, all fully and completely labeled. The material installed in these cases is distributed as follows: Southwest Ethnology, 5 cases; New Hebrides, 12

cases; Admiralty Islands, 12 cases; Fiji, 8 cases; Chinese, 19 cases; Tibetan, 14 cases. As regards American ethnology, one case of Apache medicine shirts, one case of painted buffalo hides, two cases bearing on Paiute ethnology from California and Nevada, and one case of Pima storage baskets have been added to the Southwest Section, under the personal supervision of Assistant Curator Owen. Hall 8 has been cleared of nine cases of Borneo, three of Andaman and Nicobar, and one of Malay Peninsula material, these thirteen cases being stored indefinitely with the great number of installed cases already on the floor of the East Court. As Halls 2 and 3 have recently been devoted to the exhibition of New Hebrides, Admiralty and Fiji ethnology of the Joseph N. Field Collections, this arrangement resulted in the necessity of removing the following cases for storing in the East Court: three Sauk and Fox, one Iroquois, one painted buffalo hides, two Apache, two Warm Springs, three Shoshoni, one Klikitat, one Yakima, two Ute, two Wasco, one Comanche, one Bannock, one Kutenai, one Umatilla, and two Nez Perce. More than ninety boxes containing the Stanley McCormick Hopi material have been unpacked in Hall 16. The material has been classified and placed temporarily in new cases and storage bases, awaiting permanent installation with the exhibits of Hopi ethnology which, for the past fifteen years, have been displayed in Halls 15, 16, and 17. In Hall 17 the Hopi Home Case has been completely overhauled, the clothing renovated, and the five life-size figures repainted. Nine altar cases in the same Hall have also been subjected to a most careful and thorough examination and readjustment.

Peruvian pottery, particularly from Chancay, and Egyptian tomb tablets have been properly treated and cared for to insure their preservation. About 400 photographs which had been stored in Hall 48 for many years have been identified as belonging to about thirty tribes, and each lot has been placed in the cases where the respective tribal group is represented. Many of these prints, varying in character and quality, show scenes no longer obtainable, and before being permanently installed in the various cases, should be copied on permanent paper for exhibition purposes, while the old solio prints may be preserved for the Department albums.

During the year Assistant Curator Lewis has installed thirty-two cases of Melanesian material. These, with cases installed towards the end of the previous year, include the collections from Fiji, the New Hebrides Islands, and the Admiralty Islands. Assistant Curator Cole coöperated with Dr. Lewis and superintended the installation of the material from the Fiji Islands, which fills seven cases, illustrating the clothing and ornaments, household utensils, weapons, and various



industries of the natives. The manufacture of tapa, an industry common throughout the whole of the South Seas, is well illustrated by numerous specimens of the implements used in the process, as well as by a great variety of finished product. Fourteen cases of New Hebrides material make an exhibit fairly representative of the culture of these islands, many of which have now almost completely lost their original features. The collections are most complete from Malekula, the largest and least known of the whole New Hebrides group. In this island alone over twenty languages are spoken, and the culture is by no means uniform. The collection illustrating the ceremonial and religious life of this people,—consisting of carved images, masks, prepared skulls, and figures of the dead,—is unusually complete. The various types of weapons employed by the tribe are also well illustrated, though many forms still remain to be represented. The Admiralty Island collection now occupies fourteen cases, while a considerable portion of it is not yet placed on exhibition. This collection is notable for the wealth in objects characteristic of the high degree of skill reached by these people in wood carving and decorative art. Particularly striking are the huge drums, finely carved food-bowls, some of them four feet in diameter, decorated wooden beds, and numerous carved images of various sizes,—all manifesting a well-developed artistic sense. There are several series showing the variations of design from realistic to conventional and geometrical stages, such as displayed by the forms of decorations on spears, daggers, and combs. Interesting groups of decorative elements are also seen in their personal ornaments, among which are included over 300 breast ornaments of shell and tortoise-shell, all different in decorative design despite the uniformity of type, and presenting excellent source-material for the study of variability of ornamental forms. There is also shown an extensive series of shell-bead dancing-aprons, which are rare. The process in the making of these shell beads is illustrated by numerous specimens in the consecutive stages of the work. Methods of fishing, including that of fishing by means of flying kites from canoes, which is restricted to a few localities, and the manner of preparing articles of food, are likewise shown, together with models of various types of canoes. Worthy of particular mention are the four remarkable feather masks from Hansa Bay, New Guinea, presented by the late Mr. Joseph N. Field, and now placed on exhibition in the East Court. The Melanesian collections, thus briefly outlined in their main contents, have been assembled in Halls 2 and 3, which were thrown open to the public in the beginning of November. In addition to the installation and labeling of cases, much work has been accomplished by Assistant Curator Lewis in overhauling and sorting

out the different collections from other parts of Melanesia already in the Museum, many of which had not been catalogued. This cataloguing is now being pushed on with energy, and approximately 900 specimens of the Parkinson collection, as well as a few other small collections, have been entered and numbered.

In the Asiatic Section installation has progressed steadily. Two large special cases designed for the Chinese stage-scenes were delivered in January, and all material and labels relating to these exhibits having been fully prepared in advance, their installation was achieved without delay. This completed the exhibits of Hall 53, which is now entirely devoted to a display of Chinese theatricals. Moreover, two new Halls have been added this year to the existing six, referred to and described in preceding Reports, and made accessible to the public. The Tibetan collection secured under the auspices of the Mrs. Blackstone Fund has received a further extension in Hall 50, which consists of 12 cases illustrating the domestic, social, and religious life of the Tibetan people in the following phases: objects used in the household; consumption of food, including articles of food, as well as the utensils serving for their preparation; consumption of tea; consumption of spirits and tobacco; basketry; ceremonial silk scarves exchanged by people in social intercourse; writing and printing; charms and domestic art; musical instruments, censers and other objects, and paraphernalia employed in the temples for religious worship. The case illustrating the process in the production of paper and books is of great culture-historical interest; it forms a counterpart of the case arranged two years ago and displaying the arts of printing and engraving in China and Japan. It contains exquisite specimens of Tibetan manuscript work written in gold and silver on black-lacquered paper, manuscripts illuminated by colored miniatures, in which the Lama scholars excelled as successfully as the mediæval monks, and fine samples of Tibetan and Mongol prints; especially notable are some books printed in vermilion in the Imperial Palace of Peking (so-called palace editions), and one of the largest and heaviest books ever turned out (93¼ pounds in weight; pages measuring 2 feet 10½ inches in length and 14½ inches in width). The case, further, contains an interesting autograph written in vermilion ink by the Dalai Lama with his own hand and transmitted by him to Mr. Laufer for presentation to the Field Museum when he had an interview with him at Peking in 1908; there is also on view an attractive series of seals with wax reproductions of their inscriptions, writing-utensils, and appliances of the printer. Hall 49, which had served during the last years as a storage-house for the East-Asiatic material and as the basis of operation to prepare and catalogue it, has been

entirely cleared, as it is planned to utilize this room for the continuation of the Tibetan exhibits, which will comprise means of transportation, saddlery, industries, costumes, jewelry, painting, and the culture of the Tibetan nomad tribes. Owing to this arrangement it was made possible to relieve the congestion prevailing in the East Court by transferring 24 new cases to Hall 49. A Tibetan coracle and the trappings of a horse, shown on a papier-maché model, are already installed in this Hall.

Much time was consumed on the final installation of the large collection of Chinese stone sculpture. The pieces are of great dimensions and heavy in weight, and required drilling of their bases to secure solid and permanent intrenchment on the shelves. The material is installed in 12 two-foot cases, eight of which have been placed in the Rotunda of the East Annex, Hall 58, which seemed to offer the most suitable location. In order to make the best use of the available space, the principle of concentric arrangement has been adopted, the centre being occupied by a small special case sheltering an octagonal pillar inscription of the T'ang dynasty,—an important historical document which records the capture of the city of Taochow in Kansu Province through the Tibetans in the eighth century. From this centre radiates the collection of sculpture with an inner ring of four cases arranged in a square, and fortified by an outer ring of four others, flanking the niches. The distribution, balancing, and classification of the material in the cases proved a task beset with no small difficulties, partially due to the difference in bulk and weight of the single sculptures, partially owing to the repetition of the same types through the various periods of Chinese history. A chronological principle and simultaneously one according to religious types and subjects has been brought into effect. The collection well demonstrates the development of Chinese sculpture in its total range from the fourth to the eighteenth century, embracing the two religions of Buddhism and Taoism. Three main chronological divisions have been established: the early or pre-T'ang period, fourth to sixth century, mediæval or T'ang period (618–906), and the retrospective modern or after-T'ang epoch. The assemblage of ancient Taoist sculpture is probably unique and exceptionally rich in beautiful statues of the Supreme Deity of the Taoist pantheon; it fills two cases which have been added to the Taoist section in Halls 46 and 47,—one of these harboring in addition tombstones and inscription tablets of the T'ang period. A goodly number of Taoist sculptures has been incorporated in the Buddhistic department, in order to bring out the idea of the dependence of Taoist on Indian-Buddhist art and the interrelations of the two religions. As regards the exhibits of Buddhist statuary, the general scheme of division followed is: the Buddhas, the





ITALIAN BRONZE CISTA, THIRD CENTURY, B. C.



Bodhisatvas, and the clergy, under each of the three chronological epochs. One case is entirely devoted to the portrait-statues of Buddhist monks from the T'ang period to the present, as in this manner a most striking phase in the religious and mental development of China is very forcibly impressed upon us. Nothing could better illustrate the ennobling influence of Buddhism on Oriental society and its lofty intellectual aspirations than these portraits of religious leaders with their refined and spiritualized features, and their sermon of salvation. It should be said that the present condition of the Halls does not permit of adherence to a rigidly scientific system of classification of these exhibits.

In the Department of Botany cases representing the following economic exhibitions have been installed and fully labeled during the year: four case units of Varnish Gums; one case unit illustrating the Cycad family and its products, especially its starch roots and starches; one case unit containing the Gingko and the Yew families and their characteristic fruits and utilizations; a case illustrating in complete groups the Bacteria and their life history, the Diatoms and their methods of reproduction and growth, the Desmids and their life characteristics, and the unicellular Algæ; a case illustrating all the phases in the life history of the Marchantiaceæ; one unit case containing the Morning-glory family and characteristic products; three case units of the Rubiads and their products, including an interesting reproduction of the plant known as the "living ant's nest"; one unit case illustrating the products of the Maple family; a unit devoted to the fruit of the Coco-de-mer palm and the uses to which it is put; one unit case each comprising the products of the Milk-weed and the Horsechestnut families; a case containing both the Passionflower and the Benzoin families and their utilized products; two units exemplifying the various uses supplied by the Ferns; three units devoted to the Grass family, especially the fibers yielded by various species; one case each exemplifying the characters and uses of fibers yielded by the Screw-pine, the Sedge, the Palm, the Eel-grass and Banana families; one case exemplifying the botany and products of the Snakeroot family; one case containing both the Elm and the Protead families; one case containing new products of the Fig family; two unit cases devoted to the fruit characters, and various useful products of the Sumach family; one case devoted to the products of Yam and the Iris families; a case containing various characters and useful products of the Coca family; one case illustrating the Lignum-vitæ and the Quassia families; one unit case showing the products of the Mahogany family; two units devoted to the Connarus and the Bean families; one case comprising the characters and useful materials yielded



by the Buttercup and the Akebia families and another the Barberry and the Moonseed families; and three cases representing the botany and products of the Monkey-pot and the Pomegranate families.

In the Department of Geology two large mounts have been installed in Hall 36. One of these is the large *Leptomeryx* slab described in last year's report. This has been installed in a floor case of standard type,  $7\frac{1}{2} \times 4\frac{1}{2}$  feet in size, in which it makes an effective and attractive exhibit. The other large mount installed is a skeleton of a Cave Bear from Triest, Austria, which has been placed in a temporary case. The skeleton is remarkable for its large size and completeness. In connection with the installation of these mounts some rearrangement of the other cases was made. There were also added to the exhibition series of fossil vertebrates a skull of *Aceratherium* and one of *Ancodon*, complete skeletal fore and hind legs of the fossil camel *Oxydactylus* and a skeletal hind leg of *Alticamelus*. The two large fossil logs from Patagonia, collected by Professor Salisbury, have been installed in this Hall. One of these logs is eight feet in height and two feet in diameter and the other is nearly as large. The structure of the wood is beautifully preserved and the evidences of former tree growth are so unmistakable as to make them impressive specimens. The large slab of *Uintacrinus*, which has for some time been exhibited in this Hall, was found to be undergoing considerable disintegration owing to imperfect adherence of the slab to the plaster backing. It was therefore taken down, the thin exhibition surface removed and carefully scraped and readjusted. This was then remounted on a firm plaster bed. By this means a permanent adherence of the slab to the plaster has been obtained and a durable and attractive mounting achieved. In Hall 32 the large specimen of *Orthoceras* from Troygrove, Illinois, and a number of smaller specimens were installed and some minor rearrangements made. In Hall 30 a series of models showing the diamonds cut from the Cullinan diamond has been placed in connection with the model of that diamond. In the same Hall a large number of mineral specimens have been added to the series on exhibition, less important specimens having been removed wherever necessary to provide room. The series added includes a number of new species or occurrences that have been acquired in recent years, so that all important mineral specimens may now be considered to be on exhibition. In Hall 31 the series of lavas and volcanic products has been thoroughly rearranged in geographical groups and a number of specimens added. The additions include the series of specimens from the Japanese volcano of Sakurajima. The series of concretions, faults, and veins in this collection was also rearranged and some additions made. Some marcasite stalactites which had begun to

show signs of disintegration, were thoroughly treated with shellac and further decay checked. In connection with the rearrangement of the structural collections in this Hall, that of the study collection was carried on and considerable interchange of specimens made. About one-quarter of the entire exhibit, which occupies fifteen cases, was completely reinstalled in order to bring the series to a satisfactory condition. To the economic collections in Hall 34 a large number of specimens has been added and a considerable amount of reinstallation performed. In several of the cases the exhibits were entirely removed in order to allow painting of the interiors. These interiors are now all a uniform black. New series installed in this Hall include a number of rare earths; a series illustrating the manufacture of tungsten wire; a series of minerals resembling gold; several series illustrating the uses of cobalt, nickel, zinc, and tin; a number of additions to the building stone collection, including several marble slabs; and a model of a log washer for iron ores. The large specimens of ores in this Hall, which had hitherto rested directly on the floors of the cases and the finish of which they injured on account of their weight and jagged surfaces, have been provided with individual wooden supports placed so as not to be visible. Further injury to the cases has thus been averted. Additions to the collections illustrating the uses of cobalt, zinc, and nickel compounds have been prepared in the Museum work-rooms and placed on exhibition. These include the pigments which have these metals for base. They are shown as varnished coatings on blocks of wood four inches square. Beside each block is placed a tube of the pigment in oil partly emptied into a small watch glass, in order to show its color in quantity. Besides the zinc pigments there have been added to the collection illustrating uses of zinc, a dry cell with the zinc exposed to illustrate electrical uses of zinc; a zinc etching block and a print from it; a jar of zinc ointment, and powdered willemite used as a fluorescent screen in X-ray and radioactive work. A beginning has been made of a collection to illustrate uses of the rare earths and others of the less familiar elements. A Nernst lamp illustrates uses of zirconia, and a Welsbach mantle shows an important application of thoria and ceria that has made monazite valuable. A series of specimens shows all stages of the evolution of the filament of the tungsten electric light from the mineral scheelite to the wire ready to place in the lamp. One of the most interesting uses of titanium is shown in an example of the yellow enamel used by dentists. In order to obtain space for these additions, a collection of exhibited antimony ores was reduced. There has been added to the gold series a group of specimens illustrating the appearance of those minerals which are most frequently mistaken for gold. The series consists of two

specimens of gold in quartz and flake gold for comparative purposes and selected specimens of fool's gold or pyrite, copper pyrite, native copper in slate, and two specimens of mica, one of which is mixed with sand and one is pure. To the collection of building stones exhibited, 27 cubes and slabs have been added. A large specimen of fire clay from Missouri, received in 1912, has been installed in a case in this Hall, space being obtained by moving some less important specimens. Some of the less important pigments have been removed from their place of exhibit in Hall 33 and in their place has been installed the collection of coal tar products presented by the Barrett Manufacturing Company. The production of dyes, etc., from these substances make them of especial interest at the present time. Some additions have been made to the coal mine model in order to make some of its features more readily appreciable. Some of the underground portion has been cut away in order to show the position of the ventilating shaft and its connection with the hoisting shaft. This makes more evident the course of the ventilating system. In order to make the exhibit of washed iron ores, more instructive a small model of a log washer was constructed by the Assistant Curator and installed in connection with that exhibit. The model shows a trough containing a log bearing a series of fins arranged in a screw-like manner; a hopper and track on which the unwashed ores are brought to the washer; an engine house containing the engine for providing power for operating the washer; and a car for removing the washed ore. A scale of one-third of an inch to the foot was carefully adhered to in constructing the model, such a size having been adopted in order that the model might not overbalance the collection. The model is chiefly intended to assist the label in making the collection more instructive. The usefulness of such models has been very favorably commented on by visitors, on account of the ease with which the details of the models can be studied as compared with the noise, confusion, and complexity encountered in visits to large working plants. Some improvements have been made in the installation of the collection of petroleum shown in Alcove 107, chief among them being replacement of the large two-gallon bottles of petroleum products by smaller bottles, which are uniform in pattern with those in which the crude petroleum are installed. The appearance of the collection has thus been much improved. The installation of the other petroleum products has likewise been somewhat revised and improved. The series showing asphalts and their uses received from the Barber Asphalt Company, with two large photographs of Trinidad Lake, has been installed in Hall 35. Several new specimens of graphite have also been added to the graphite collection in this Hall. The specimens illustrating lithology and





EMBROIDERED SATIN PANELS, CHINA, EIGHTEENTH CENTURY.

Gift of Dr. Gunsaulus.



structural and dynamical geology, which occupy the drawers under the lithological exhibits, have been completely reinstalled; all specimens have been placed in trays in a logical order and labeled, the drawers have been numbered, and indexes have been prepared so that any specimen wanted can be found at once and can be shown to anyone desiring to study it. Material was prepared for several new cases for the work of the Harris Fund, in addition to a number of duplicates of those previously prepared. The new subjects illustrated include semiprecious stones, varieties of common rock, volcanic products, and coal-tar products. In the laboratory of vertebrate paleontology the preparation of vertebrate fossils has been actively continued and a considerable amount of material has been prepared. A skeleton of the sabre-tooth tiger was prepared for mounting; completion of the preparation and mounting of the slab containing 25 skeletons of the Water Deer, *Leptomeryx*, described in last year's report, was accomplished; the large slab of *Uintacrinus* was taken apart and entirely remounted; a skeleton of the Cave Bear was repaired and remounted; a nearly complete skeleton of the fossil camel *Oxydactylus* and a skull of *Elotherium* were prepared for exchange; a partial skeleton of *Oxydactylus* and skulls of *Aceratherium* and *Ancodon* were prepared for exhibition; a large specimen of *Orthoceras* was cleaned of plaster and a durable mount provided; the skeleton of the Washington mammoth presented by Mr. George Manierre was disarticulated and carefully packed in boxes so as to provide safety in storage; a set of jaws of the large shark *Charcharodon* was cast in plaster and mounted for the purpose of replacing the former exhibit of this kind which was somewhat defective as to detail; some progress was made in mounting a skeleton of *Canis diurus*, and the entire collection of teeth of mammoths and mastodons, some of which were undergoing disintegration, was carefully treated in such a manner as to insure its preservation.

In the Department of Zoölogy a large habitat group of American Bison or Buffalo, consisting of five animals, a large old bull, a young bull, two females, and a calf, has been added to the exhibition collection. The scene is laid in Nebraska. Burrowing Owls, Prairie Dogs, and Rattlesnakes, which are common in that prairie country, are included in the group. The following single mammals have been installed and placed on exhibition in the serial collection: Chinese Takin (*Budorcas bedfordi*), a rare large mammal; Kansu Deer (*Cervus kansuensis*); Spectacled Bear (*Tremarctos ornatus*), a rare species from the Andes of Peru secured by Museum expedition, as was also the White-lipped Peccary (*Tayassu pecari*); Drill (*Papio leucocephalus*); White-tailed Mongoose (*Ichneumia albicauda*), and Porcupine (*Erethizon dorsatum*).



Painted backgrounds for a large group of Moose and a group of South American Capybara, including a Jaguar, have been prepared, and considerable work on the accessories for both these groups has already been done. The mounting of the specimens for the Moose group, very fine specimens secured by a Museum expedition last fall, is progressing in a satisfactory manner. A new method for making artificial bodies (manikins) for small mammals was introduced by Taxidermist Pray, which seems a decided improvement over the old way. A striking group of East African Buffalo, created by Carl E. Akeley, was installed in the South Court late in the year. This group, which includes two old bulls, one young bull, a cow, and a calf, is an impressive example of the possibilities of modern taxidermy. The five bulky animals are so skilfully and naturally grouped that the effect of space and power is not lost even in the confinement of a case of moderate size. In addition to simplicity and fidelity to nature both in grouping and in modeling, the individual animals of this group have an unusual quality produced by a new and superior technique in the treatment of the skin. The principal feature of this method consists in applying the tanned skin to the model in a dry instead of moistened condition. The result in the finished specimen, especially in the case of thinly haired animals, is much more lifelike than that of other methods, the skin appearing soft and natural instead of hard and unyielding. In the exhibition of comparative osteology 445 skulls were cleaned, and the following skeletons mounted and installed: Gila Monster (*Heloderma horridum*); Box Turtle (*Cistudo carolina*); Jacana (*Jacana spinosa*); Pigeon (*Columba livia*), and Cave Bat (*Eonycteris spelæa*). A large habitat group of birds representing bird life in the far north on Walrus Island, Alaska, has been completed and placed on exhibition. This group includes 51 birds with nests, eggs, and several nestlings; some of them, notably the Red-faced Cormorant, are rare and are becoming more so each year. Among the most interesting birds in this group may be mentioned, in addition to the Red-faced Cormorants, the Tufted Puffins, Horned Puffins, Paroquet Auklets, and various species of Gulls (among them the Red-legged Kittiwake Gull), Murres, etc. An instructive feature of the group is in showing the Glaucous and Glaucous-winged Gulls stealing and eating the eggs of the Pallas Murres, which breed in great numbers on this barren, isolated island. For the serial collection there were mounted: 1 Coot (*Fulica americana*); 1 Red-shouldered Hawk (*Buteo lineatus*); 2 Kittlitz Murrelets (*Brachyramphus brevirostris*), and 1 Harlequin Duck (*Histrionicus histrionicus*). A number of bird skins from fresh specimens sent in for the study collection, including the Snowy Owl, were prepared. A number of fishes and

crustaceans have been painted for the exhibition collection. One exhibition case of mounted fishes from California was installed, and 88 fishes, 79 from Florida and California and 9 from Alaska, have been mounted and painted. Included are many handsome species, among them being a number of Salmon and Trout from California. A considerable number of specimens of various insects, moths, butterflies, beetles, etc., have been pinned and prepared. Early in the year 16 A-shaped cases were delivered for installing the exhibition collection of shells and insects to replace the flat cases at present in use. The Assistant Curator of Entomology devoted considerable time to rearranging shells for the new method of installation. Upon the return of Collector Becker from South America he was added to the staff of assistants in this Department and devoted his time to this work.

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM OF NATURAL HISTORY.  
—The Curator reports that the practical inauguration of Mr. Harris' benefaction has been attended with success. The cases prepared during the year number 207, making, with the cases previously installed, a grand total of 286. The pupils in the public schools examining these collections during the year numbered 368,044. The schools provided with cases were 326, divided as follows: Main Schools 266, Branch Schools 39 and Vacation Schools 21. Each Main School was provided with not less than 6, each Branch School with not less than 3, and each Vacation School with not less than 12 cases at a time. The automobile delivery car designed for the distribution of the circulating collections was delivered during the year and has proved satisfactory. It has a capacity of 45 cases and travels each day of the school week approximately 80 to 100 miles. Thirty-four of the cases will be exhibited at the Panama Pacific International Exposition, San Francisco, during the coming year.

PHOTOGRAPHY AND ILLUSTRATION.—The reduction in the force of this section naturally affected the output for the year. Still the showing made is satisfactory. The following is a statement of the work performed:

	Number of Negatives made	Number of Prints made	Number of Lantern Slides made	Number of Enlargements made	Number of Negatives developed for Expeditions	Number of 6x8½ Posi- tives made, Used in mak- ing large Negatives
Director's Office . . . .	89	131	..	..	..	..
Anthropology . . . .	204	1,049	28	..	..	..
Botany . . . .	35	160	35	20	..	20
Geology . . . .	27	30	..	..	..	..
Zoölogy . . . .	23	297	..	..	..	..
Harris Extension . . .	45	213	..	..	33	..
Distribution . . . .	..	86	..	..	..	..
Gift . . . .	..	190	..	..	..	..
Sale . . . .	..	884	..	..	..	..
Totals . . . .	423	3,040	63	20	33	20
Total number of Catalogue entries during year 1914 . . . .						3,599
Total number of Catalogue entries to December 31, 1914 . . . .						110,827
Total number of Record Books . . . .						15

PRINTING.—The force in this Section was also reduced, but the printers were able to keep pace with the copy submitted for labels. The work performed is tabulated below:

	Exhibition Labels	Other Impressions
Anthropology . . . . .	2,660	550
Botany . . . . .	2,417	25,200
Geology . . . . .	1,588	1,000
Zoölogy . . . . .	88	.....
Library . . . . .	.....	5,000
General . . . . .	.....	30,831
N. W. Harris Public School Extension . . . .	7,803	2,120

ATTENDANCE.—The total attendance record for the year is 208,769. Appended is a list of the classes, thirty or more, that visited the Museum during the term under review.

## LIST OF CLASSES

Schools and Locations	Teachers	Pupils
University of Chicago — Chicago, Illinois . . . . .		23
University of Chicago — Chicago, Illinois . . . . .	2	28
Northwestern Military Academy — Evanston, Illinois . . . .	4	92
University Elementary — Fifty-ninth and Kenwood Avenue . .		22
John Marshall High — Adams Street between Spaulding and Kedzie Avenue . . . . .	1	34
Lake Forest — Lake Forest, Illinois . . . . .	4	79
St. Ignatius — 1076 West Twelfth Street . . . . .	1	50
University High — Fifty-ninth and Kenwood Avenue . . . .	1	34



CHINESE TAKIN (*Budorcas bedfordi*).  
Julius Friesser, Taxidermist.





Schools and Locations		Teachers	Pupils
Francis W. Parker — 330 Webster Avenue . . . . .		4	24
University of Chicago — Chicago, Illinois . . . . .		1	20
Evanston — Evanston, Illinois . . . . .		2	22
John Marshall High — Adams Street between Spaulding and Kedzie Avenue . . . . .		1	28
Hyde Park High — Sixty-second and Stony Island Avenue . . .		1	25
Broad View Seminary — La Grange, Illinois . . . . .		2	35
University of Chicago — Chicago, Illinois . . . . .		1	25
University of Chicago — Chicago, Illinois . . . . .		1	21
Winnetka — Winnetka, Illinois . . . . .		3	30
Francis W. Parker — 330 Webster Avenue . . . . .		1	20
John Marshall High — Adams Street between Spaulding and Kedzie Avenue . . . . .		1	41
Fröebel — West Twenty-first and Robey Street . . . . .		2	28
University of Chicago — Chicago, Illinois . . . . .			21
Willard — Forty-ninth and St. Lawrence Avenue . . . . .		1	46
Chicago Academy of Fine Arts — 6 East Madison Street . . .		1	45
Hyde Park High — Sixty-second and Stony Island Avenue . . .		1	160
Washington — Morgan and Grand Avenue . . . . .		2	40
Madison — Seventy-fifth and Dorchester Avenue . . . . .		2	84
Willard — Forty-ninth and St. Lawrence Avenue . . . . .		1	27
St. Patricks — 2303 Park Avenue . . . . .		2	44
St. Elizabeths High — 13 East Forty-first Street . . . . .		2	50
Hyde Park High — Sixty-second and Stony Island Avenue . . .		1	54
University of Chicago — Chicago, Illinois . . . . .			25
Englewood High — Sixty-second and Stewart Avenue . . . . .		1	90
Hyde Park High — Sixty-second and Stony Island Avenue . . .		2	50
Concordia Teachers College — River Forest, Illinois . . . . .		1	45
East Chicago High — East Chicago, Illinois . . . . .		3	34
Gallistel — One-hundred and Fourth and Ewing Avenue . . . .		1	50
Hyde Park High — Sixty-second and Stony Island Avenue . . .		1	23
Englewood High — Sixty-second and Stewart Avenue . . . . .		1	20
St. Benedicts Rectory — 294 York Street, Blue Island, Illinois .		5	60
MacGregor — Whiting, Indiana . . . . .		3	73
Hyde Park High — Sixty-second and Stony Island Avenue . . .		1	32
Sherlock — Cicero, Illinois . . . . .		1	52
Greek American — Sixty-first and Michigan Avenue . . . . .		4	40
Blue Island — Blue Island, Illinois . . . . .		7	33
River Forest — River Forest, Illinois . . . . .		1	21
Beale — Sixty-first and Sangamon Street . . . . .		1	23
Bethany Bible Institute — 3435 West Van Buren Street . . . .			24
Warren — Ninety-second and Chappel Avenue . . . . .		1	38
Notre Dame University — South Bend, Indiana . . . . .		1	25
Walsh — Twentieth and South Peoria Street . . . . .		4	40
Wells — North Ashland near Augusta Street . . . . .		2	38
Pullman — One hundred and Thirteenth and Forestville Avenue .		1	38
Willard — Forty-ninth and St. Lawrence Avenue . . . . .		2	34
Thorp — Eighty-ninth and Superior Avenue . . . . .		1	35
Raymond — Thirty-sixth Place and Wabash Avenue . . . . .		1	30
Darwin — Edgewood Avenue and Catalpa Court . . . . .		1	25



Schools and Locations	Teachers	Pupils
Willard — Forty-ninth and St. Lawrence Avenue . . . . .	1	35
University of Chicago — Chicago, Illinois . . . . .	1	60
Parkside — Seventieth and East End Avenue . . . . .	1	32
Thorp — Eighty-ninth and Superior Avenue . . . . .	1	40
Komensky — Twentieth and Throop Street . . . . .	1	29
Harper — Sixty-fifth and South Wood Street . . . . .	1	34
Blaine — Janssen Avenue and Grace Street . . . . .	1	22
Grant — Wilcox Street and Western Avenue . . . . .	1	32
Blaine — Janssen Avenue and Grace Street . . . . .		20
Normal — Sixty-eighth and Stewart Avenue . . . . .	50	
Chicago Hebrew Institute — West Taylor, corner of Lytle . . . .	2	32
Longfellow Vacation — Thirty-fifth and South Pulaski Avenue . .	13	241
Gladstone Vacation — Robey Street and Washburne Avenue . .	24	603
Olivet Institute — 709 Vedder Street . . . . .	10	224
Jewish Training — 199 West Twelfth Street . . . . .	9	90
Agassiz — Diversey Boulevard and Seminary Avenue . . . . .	17	280
De Paul University — 1010 Webster Avenue . . . . .	1	30
Summit — Summit, Illinois . . . . .	1	30
Evangelic Lutheran Concordia — Sheffield, corner of Waveland Avenue . . . . .	1	44
Wendell Phillips High — Thirty-ninth and Prairie Avenue . . . .		33
Convent of the Holy Child — 6585 Sheridan Road . . . . .	1	28
Washington — Morgan and Grand Avenue . . . . .	1	58
Carter Practice — Sixty-first and Wabash Avenue . . . . .	2	51
Francis W. Parker — 330 Webster Avenue . . . . .	1	32
Goodrich — Sangamon and Taylor Street . . . . .		21
Chicago Latin — 20 East Division Street . . . . .	1	21
University High — Fifty-ninth and Kenwood Avenue . . . . .	1	21
McCosh — Sixty-fifth and Champlain Avenue . . . . .		43
J. Sterling Morton High — Sterling, Illinois . . . . .	1	30
Ray — Fifty-seventh and Kenwood Avenue . . . . .	2	48

Herewith are also submitted financial statements, list of accessions, names of members, etc., etc.

FREDERICK J. V. SKIFF, Director.





BUILT-IN HOLLOW MANIKIN METHOD FOR MOUNTING SMALL MAMMALS.

The initial step is to wire the specimen as though the ordinary method of mounting were to be followed. The inside of the skin is then given a coating of poison paste and immediately afterwards the composition is put in and modelled. The most satisfactory composition used so far is one made of library paste, water, and a pinch of arsenic, to which is added whiting and sufficient chopped tow to make the mixture of the proper consistency for modelling but nevertheless sticky. The cavity in the manikin is then lined with cloth and filled with sawdust, which, when the specimen is dry, is removed by means of the plug (p) inserted in the end of the body, or in the side, if the animal is to be in a recumbent position. Depressions in the anatomy are maintained by the use of insect pins, which are cut off flush when the skin has adhered properly to the manikin. The legs of very small mammals may be filled wholly with composition, as is shown in the figure (c), but the legs of larger mammals should have a wrapped core. The tail wire (t) is merely wrapped with cotton to secure the required thickness. The advantage of this hollow manikin method is that the mounted specimen is light, very durable and almost indestructible. (Originated and used by Leon L. Pray.)

## FINANCIAL STATEMENT

### RECEIPTS AND DISBURSEMENTS

January 1, 1914, to December 31, 1914

#### RECEIPTS

Cash in Treasurer's hands, General Fund, December 31, 1913 . . .	\$11,690.37
Cash in Treasurer's hands, Endowment Sinking Fund, December 31, 1913 . . . . .	180.00
Cash in Treasurer's hands, New Exhibition Cases Fund, December 31, 1913 . . . . .	930.75
Petty Cash on hand, December 31, 1913 . . . . .	739.95
Dues of Life Members . . . . .	500.00
Dues of Annual Members . . . . .	1,090.00
Admissions and Check Rooms . . . . .	5,526.50
Sales of Guides . . . . .	158.75
South Park Commissioners . . . . .	15,000.00
Interest on Investments and Bank Balances . . . . .	9,609.62
Field Endowment Income . . . . .	136,500.00
Field Endowment Sinking Fund . . . . .	500.00
Field Endowment Sinking Fund Income . . . . .	160.00
New Exhibition Cases Fund . . . . .	3,500.00
New Exhibition Cases Fund Investments retired . . . . .	53,713.67
New Exhibition Cases Fund Income . . . . .	1,913.09
Stanley Field Ornithology Fund . . . . .	1,200.00
Mrs. T. B. Blackstone Fund . . . . .	900.00
Huntington W. Jackson Library Fund . . . . .	40.00
Donations — George Manierre . . . . .	500.00
Life Memberships Fund Income . . . . .	292.45
Life Memberships Fund Investments retired . . . . .	4,500.00
Sales of Picture Postal Cards . . . . .	433.34
Sundry Receipts . . . . .	72.02
	\$249,650.51

#### DISBURSEMENTS

Salaries . . . . .	\$73,489.35
Guard Service . . . . .	12,208.03
Janitor Service . . . . .	7,121.35
Fire Protection . . . . .	6,124.50
Heat and Light:	
Wages . . . . .	\$4,102.00
Fuel . . . . .	6,967.78
Gas . . . . .	459.04
Renewals, supplies, and sundries . . . . .	906.71
	12,435.53

400 FIELD MUSEUM OF NATURAL HISTORY — REPORTS, VOL. IV.

Repairs and Alterations —

Wages — Carpenters, Painters, Roofers, etc.	\$8,717.49	
Materials used — lumber, paints, oils, glass, etc.	1,705.53	10,423.02

Furniture and Fixtures — Cases . . . . .		29,067.24
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The Library —

Books and Periodicals . . . . .	\$1,472.73	
Binding . . . . .	532.48	
Sundries . . . . .	29.53	2,034.74

Sections of Printing and Photography . . . . .		4,283.15
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Collections, etc., purchased . . . . .		27,287.44
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Departmental Expenses . . . . .		2,940.91
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Expeditions . . . . .		584.19
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Publications . . . . .		2,815.99
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General Expense Account —

Freight, Expressage, and Teaming . . . . .	\$1,925.73	
Stationery, Postage, Telephone, etc. . . . .	836.73	
Picture Postal Cards . . . . .	518.00	
Liability Insurance Premium . . . . .	697.56	
Sundries . . . . .	1,408.81	5,386.83

Stanley Field Ornithology Fund . . . . .		1,457.25
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Mrs. T. B. Blackstone Fund . . . . .		936.00
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In Treasurer's hands, December 31, 1914 —

General Fund . . . . .	\$10,828.95	
New Exhibition Cases Fund . . . . .	3,490.27	
Endowment Sinking Fund . . . . .	525.00	
Picture Postal Card Account . . . . .	433.34	15,277.56

Petty Cash on hand, December 31, 1914 . . . . .		739.95
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Life Memberships Fund Investments . . . . .		6,746.69
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Huntington W. Jackson Library Fund Investments . . . . .		475.79
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Endowment Sinking Fund Investments . . . . .		315.00
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New Exhibition Cases Fund Investments . . . . .		27,500.00
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\$249,650.51

# ATTENDANCE AND RECEIPTS FROM JANUARY 1 TO DECEMBER 31, 1914

## ATTENDANCE.

Paid Attendance —		
Adults . . . . .	19,101	
Children . . . . .	2,098	21,199
Free Admission on Pay Days —		
School Children . . . . .	4,653	
Students . . . . .	3,398	
Teachers . . . . .	516	
Members: Corporate . . . . .	43	
Annual . . . . .	19	
Life . . . . .	6	
Officers' Families . . . . .	76	
Special . . . . .	268	
Press . . . . .	23	9,002
Admissions on Free Days —		
Saturdays . . . . .	50,816	
Sundays . . . . .	127,752	178,568
Total Attendance . . . . .		208,769
Highest Attendance on any one day (July 5, 1914) . . .		6,738
Highest Paid Attendance on any one day (September 7, 1914)		569
Average Daily Admissions (363 days) . . . . .		575
Average paid Attendance (261 days) . . . . .		81

## RECEIPTS.

Guides Sold — 635 at 25 cents each . . . . .	\$ 158.75
Articles Checked — 10,829 at 5 cents each . . . . .	541.45
Admissions . . . . .	4,985.05
	<hr/>
	\$5,685.25



## ACCESSIONS

### DEPARTMENT OF ANTHROPOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AYER, E. E., Chicago, Illinois.

Large bronze Etruscan vessel.

Small variegated glass bottle, neck and shoulders being restored in plaster—Egypt.

Beautiful statuette, female, of diorite (exchange).

BARKER, MRS. FRANK W., Chicago, Illinois.

1 fragmentary Roman tile.

7 Asiatic stone weights.

2 Greek vases (an original and a copy).

1 Egyptian Ushabti figure.

1 Fan—India.

1 Fancy Fan.

1 N. W. Coast horn spoon.

6 N. W. Coast gambling sticks.

8 specimens Hawaiian ethnology.

BLACKSTONE, MRS. T. B., Chicago, Illinois.

1 Japanese gold coin.

1 Japanese silver coin.

690 Chinese coins—Wei-hien, Shantung, China.

DEVLIN, MRS. FRANK A., Chicago, Illinois.

3 carved cups, made from a pod—Costa Rica.

2 small clay vessels, prehistoric—Costa Rica.

DORSEY, GEO. A., Chicago, Illinois.

3 Chinese printing-blocks from Examination Hall at Nanking, Nanking, China.

ELLIS, RICHARD GORDON, Chicago, Illinois.

Rawhide lariat.

Wooden bow with skin case.

Stone celt.

Stone disc.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by Chas. L. Owen:

3 two-faced Navajo blankets.

1 two-faced Navajo blanket, in the weaving.

1 ball coarse white yarn.

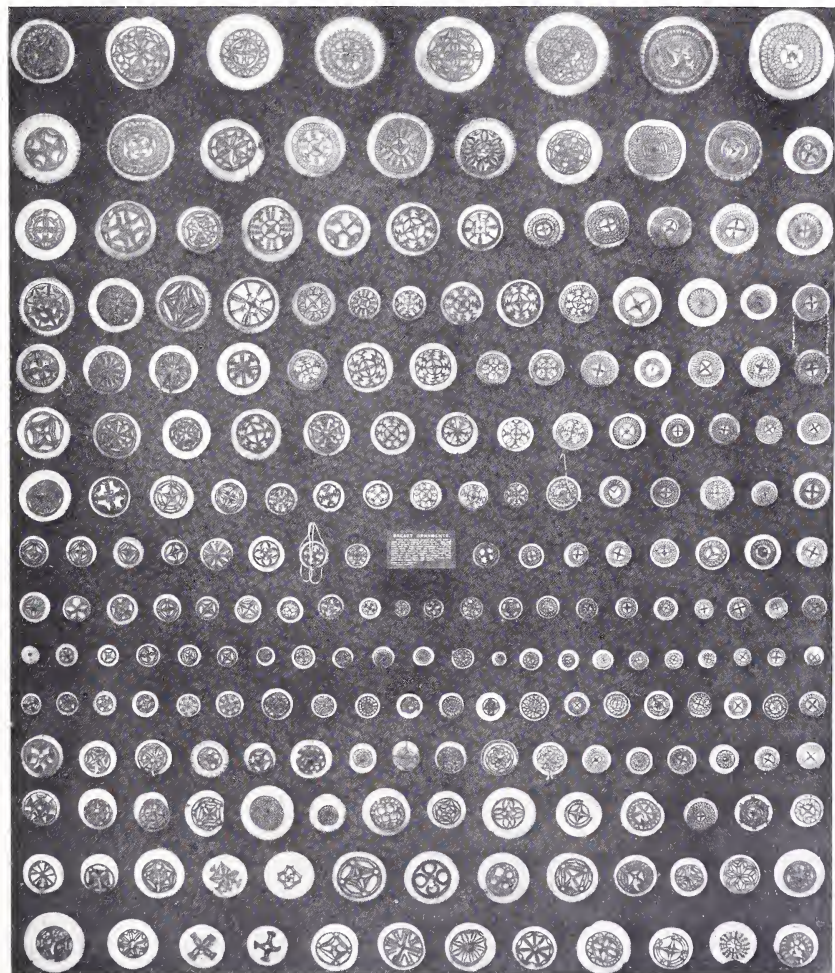
1 ball coarse black yarn.

1 plaited wool rope.

1 batten.

1 reed fork.

1 shuttle—N. E. Arizona.



BREAST ORNAMENTS OF SHELL AND TORTOISE SHELL, ADMIRALTY ISLANDS.  
The Joseph N. Field Expedition.



## Purchases:

- 2 nephrite tablets from imperial jade book inscribed in Manchu, China.
  - 1 wood-carved seal.
  - 1 grant written on yellow satin and bestowed by Emperor K'ang-hi on  
Lama Temple near Taochow, Taochow, Kansu Prov., China.
  - 20 tear bottles from Egypt.
  - 2 Italian bronze vessels of Greek style, Rome.
- FOWLER, E. H., Chicago, Illinois.  
Large flaked implement, shells, fragments of pottery, rejects from cave,  
and five stone objects—Pinal Co., Arizona.
- FRIESSER, J., Chicago, Illinois.  
1 Buffalo skull—Fort Pierre, South Dakota.
- GUNSAULUS, DR. F. W., Chicago, Illinois.  
2 silk embroidered hangings from Imperial Palace of Peking, Peking.  
2 Japanese water colors framed under glass—Japan.
- KALDENBERG, F. W., New York City.  
1 Rhinoceros horn.
- LOWE, DR. W. S., Phoenix, Arizona.  
6 sections of ceremonial cane stem.  
3 same as preceding, with the addition of a small rectangular cotton fabric  
tied around the joint—Camelback Mts., Arizona.
- MASON, THOMAS, Chicago, Illinois.  
1 Chinese mariner's compass, in case of polished copper—Hankow, China.
- MOORE, C. B., Philadelphia, Pennsylvania.  
Archeological specimens.
- ROBERTS, GEORGE C., Sharon Hill, Pennsylvania.  
50 arrow-heads.  
2 stone axes.
- SARGENT, HOMER E., Chicago, Illinois.  
Mexican gold ring—Mexico.
- SCHROTT, FRED, Salt Lake City, Utah.  
Flaked knife blade of chert—Caliente, Nevada.
- TAYLOR, DR. JOHN R., Madison, Wisconsin.  
3 Chinese paintings representing a match of polo—China.  
2 painted albums—Peking, China.
- WARDEN, CLEAVER, Carlton, Oklahoma.  
Peyote Outfit—Oklahoma.

## DEPARTMENT OF BOTANY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

- ARTHUR, PROF. J. C., Lafayette, Indiana.  
Herbarium specimens.
- BAMBER, C. A., St. Cloud, Florida.  
1 bundle Palmetto sheaths—St. Cloud, Florida.
- BUREAU OF PLANT INDUSTRY, Washington, D. C.  
Herbarium material, 200 Grasses (exchange).  
Specimens of Crude Drugs (exchange).
- CARSON, DR. H. R., Phoenix, Arizona.  
Herbarium specimen—Arizona.

COKER, W. C., Chapel Hill, North Carolina.

Herbarium specimen—South Carolina.

COOS BAY PULP & PAPER COMPANY, Marshfield, Oregon.

Compound Pulp for paper manufacture—Marshfield, Oregon.

COVILLE, DR. FREDERICK V., Washington, D. C.

Photograph of the original description of *Euphorbia adenoptera*.

COWLES, PROF. H. C., Chicago, Illinois.

1241 herbarium specimens.

Herbarium specimens—Indiana and Greenhouse.

CURTISS, MISS E., Chicago, Illinois.

Private herbarium of George F. Curtiss.

DAHLGREN, DR. B. E., Chicago, Illinois.

Herbarium specimens—Colorado.

DAY, MISS MARY F., Cambridge, Massachusetts.

Generic descriptions—Cambridge, Massachusetts.

DEUSNER, C. W., Chicago, Illinois.

His herbarium—Illinois and Indiana.

FIELD MUSEUM OF NATURAL HISTORY.

Collated by O. E. Lansing, Jr.:

1 plant description.

Collated by C. F. Millspaugh:

337 herbarium specimens.

31 illustrations of species.

Wood of Oregon Maple.

Wood plates Sugar Maple.

1 specimen fruit.

1 specimen wood.

3 parts herbarium specimens—New Mexico.

Collated by H. H. Smith:

3 board specimens—Philippines.

Collected by B. E. Dahlgren:

Dry fruit *Pandanus*—Jamaica.

Collected by O. E. Lansing, Jr.:

229 herbarium specimens—Starved Rock State Park, Illinois and Indiana.

Collected by H. H. Smith:

14 herbarium specimens—Indiana.

147 economic specimens—Indiana.

Purchases:

424 herbarium specimens—Nevada and California, Texas and New Mexico

Various fibers and their utilizations—Philippine Islands.

200 herbarium specimens.

Herbarium specimens.

863 herbarium specimens.

1414 herbarium specimens — Mexico.

2 herbarium specimens — Bolivia.

56 herbarium specimens — Tobago.

Cocaine.

Rose petal rosary and components — California.

Section of Modeling:

7 glass reproductions of *Desmidae*.



- Green Algae and Desmids.
- Branch of Horsechestnut.
- Flowers of Horsechestnut.
- Fruits of Horsechestnut.
- Chocolate pod.
- Chocolate cake.
- Reproduction of fruit of *Pandanus utilisissimus*.
- Sectional fruits of *Connarus* — Java.
- FOREST ECONOMIST, Dahra Dun, India.
  - 9 economic forest products — India.
  - 19 vegetable products — India.
- FORBES, F. F., Brookline, Massachusetts.
  - 23 herbarium specimens.
- GARCIA, DR. CRESCENCIO, Tigulpan, Mexico.
  - Coca leaves — Mexico.
- GAULT, BENJ. T., Glen Ellyn, Illinois.
  - Trunk section.
  - Board specimen.
  - Photographic prints all of *Crataegus Gaultii* Sarg. — Illinois.
- GRAY HERBARIUM, Cambridge, Massachusetts.
  - Description of *Euphorbia adenoptera*.
- GREENE, PROF. E. L., Washington, D. C.
  - 2 herbarium specimens.
- HAMILTON MANUFACTURING COMPANY, Two Rivers, Wisconsin.
  - Maple wood type — Wisconsin.
- HELLER, A. A., Chicago, Illinois.
  - 5 herbarium specimens.
- HOLZINGER, JOHN M., Winona, Minnesota.
  - 1 herbarium specimen — Coronation Island, Alaska.
- KROUT, DR. A. F., Glenolden, Pennsylvania.
  - 4 herbarium specimens — Pennsylvania.
- LAUFER BERTHOLD, Chicago, Illinois.
  - Derge paper-root and paper. Tibetan Tea.
  - Tibetan medicines — Tibet.
  - Tibetan Brick Tea — Tibet.
- MILLSPAUGH, MRS. CLARA MITCHELL, Chicago, Illinois.
  - Cherry tree gum — Lake Side, Michigan.
- MILLSPAUGH, C. F., Chicago, Illinois.
  - Fruits of *Asclepias syriaca*.
  - Fruits of *Calotropis gigantea* — Jamaica and Illinois.
  - 192 colored illustrations of Mushrooms — Austria.
  - Bundle Scouring rushes — Lake Side, Michigan.
  - 65 herbarium specimens — Michigan.
  - 3 herbarium specimens — District Columbia.
- MISSOURI BOTANICAL GARDEN, St. Louis, Missouri.
  - 316 herbarium specimens — Austro-Hungary.
  - 2 photographs of a type (exchange).
- NATAL HERBARIUM, Berea, Durban, Union of South Africa.
  - 101 herbarium specimens — South Africa.



NEW YORK BOTANICAL GARDEN, New York City.

2 herbarium specimens — Jamaica (exchange).

649 herbarium specimens (exchange).

Specimen of *Pedilanthus Smallii* Millsp. (exchange).

10 herbarium specimens (exchange).

220 herbarium specimens — West Indies (exchange).

2 herbarium specimens — Big Pine Key, Florida (exchange).

1 herbarium specimen — Mexico (exchange).

PADILLA, DR. SISTO ALBERTO, Salvador.

1 herbarium specimen — Salvador.

PARISH, S. B., San Bernardino, California.

6 herbarium specimens — California.

REECHER, S. E., Chester, Illinois.

8 herbarium specimens — Illinois.

REYNOLDS, MISS CARRIE A., Chicago, Illinois.

Herbarium specimens — Illinois, Yellowstone, San Juan Island.

SAFFORD, LIEUT. W. E., Washington, D. C.

Dried petals of *Cymbopetalum penduliflorum* — Guatemala.

SHERFF, EARL E., Chicago, Illinois.

1 herbarium specimen — France.

SMITH, HURON H., Chicago, Illinois.

160 herbarium specimens — Illinois and Wisconsin.

UNITED STATES FOREST PRODUCTS LABORATORY, Madison, Wisconsin.

44 specimens of Wood Pulp for paper making (exchange).

UNITED STATES NATIONAL MUSEUM, Washington, D. C.

6 photographs of types (exchange).

UNIVERSITY OF PENNSYLVANIA, Herbarium, Philadelphia, Pennsylvania.

56 herbarium specimens (exchange).

URBAN, PROF. DR. IGNATZ, Daglem-Steglitz.

Part of type herbarium specimen — Cuba.

WAITE GRASS CARPET COMPANY, Oshkosh, Wisconsin.

5 specimens illustrating the manufacture of grass carpet — Wisconsin.

WILLEY, C. L. COMPANY, Chicago, Illinois.

Board and veneer of Gaboon Mahogany — Gaboon, Africa.

WOLCOTT, A. B., Chicago, Illinois.

1 herbarium specimen — Illinois.

## DEPARTMENT OF GEOLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AMERICAN VANADIUM COMPANY, Pittsburgh, Pennsylvania.

3 specimens vanadium ores — Minasrarga, Peru.

BARBER ASPHALT PAVING COMPANY, Philadelphia, Pennsylvania.

46 specimens asphalt and asphalt products.

2 large photographs of Trinidad Pitch Lake — Trinidad and Venezuela.

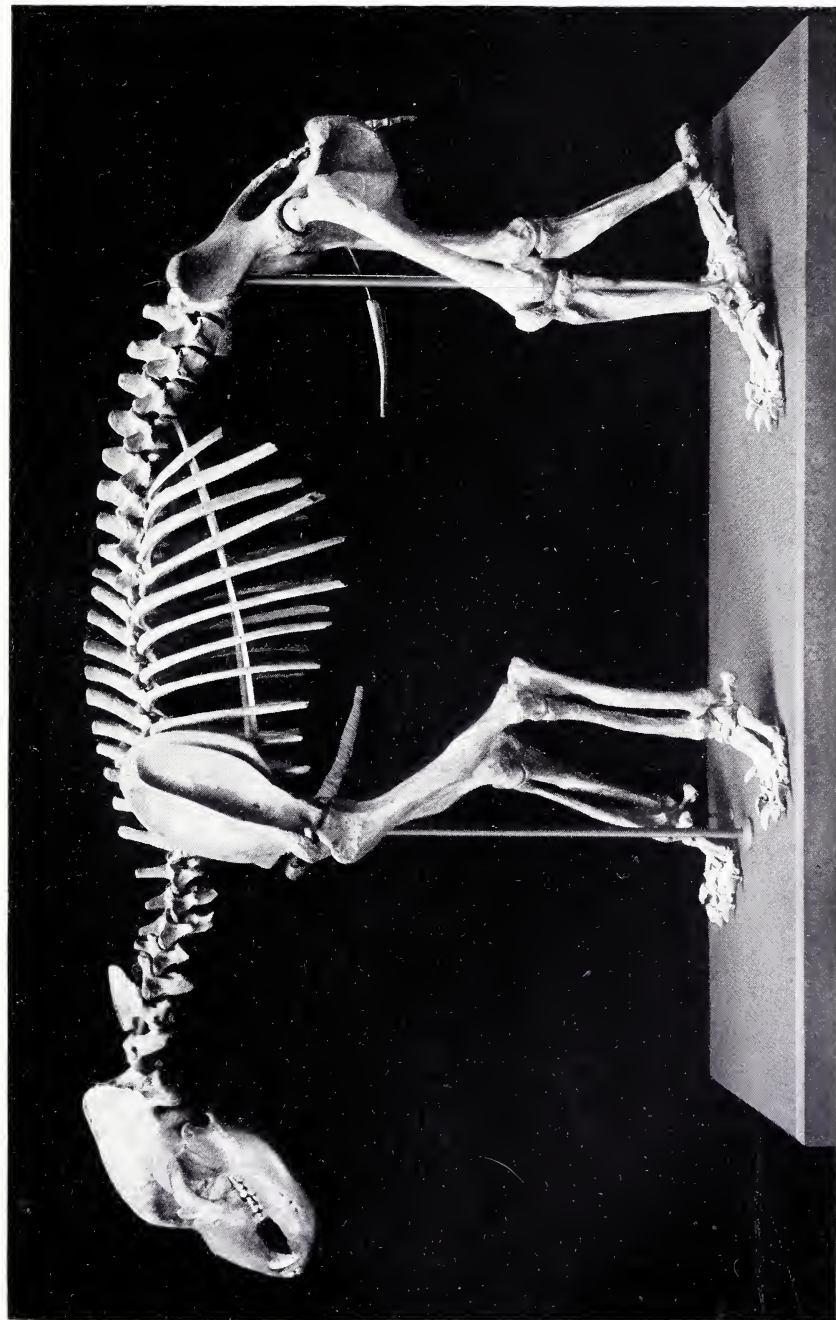
BARKER, MRS. F. W., Chicago, Illinois.

1 specimen travertine.

1 specimen tourmaline.

BARRETT MANUFACTURING COMPANY, Chicago, Illinois.

11 specimens coal tar and products.



FOSSIL SKELETON OF CAVE BEAR (*Ursus spelaeus*) FROM TRIEST, AUSTRIA.



**BURNHAM, AUSTIN A., Cleveland, Ohio.**

- 1 specimen fossil fish (*Palaeoniscus brainerdi*) in matrix — Chagrin Falls, Ohio.

**BLACKWELL, JOHN T., Chicago, Illinois.**

- 12 specimens agate, jasper, opal, etc., — Trinity County, California.

**BOSS GOLD MINING COMPANY, Goodsprings, Nevada.**

- 2 specimens platinum and gold ore — Goodsprings, Nevada.

**BOYDEN, DWIGHT B., Chicago, Illinois.**

- 20 specimens bonanza silver ores.
- 1 specimen native copper — Mexico and Arizona.

**BROCKWAY, WM., Tlatlaya, Est. de Mexico, Mexico.**

- 16 specimens gold ores and associated minerals — Tlatlaya, Mexico.

**CHICAGO VARNISH COMPANY, Chicago, Illinois.**

- Block varnished with elaterite varnish.

**CLEVELAND STONE COMPANY, Cleveland, Ohio.**

- 1 dressed specimen of Gray Canyon sandstone — Cleveland, Ohio.

**MICHAEL COHEN & COMPANY, New York City.**

- 1 four-inch cube of Caen stone — France.

**COLORADO-YULE MARBLE COMPANY, Chicago, Illinois.**

- 1 four-inch cube white Colorado-Yule marble — Yule Canyon, Colorado.

**CURTISS, MISS E., Chicago, Illinois.**

- 289 specimens minerals and fossils.

**DETROIT GRAPHITE COMPANY, Chicago, Illinois.**

- 1 specimen graphite — Baraga County, Michigan.

**JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, New Jersey.**

- 5 specimens crude and refined graphite.

**DJORUP, FRANTZ, Chicago, Illinois.**

- 4 specimens magnesium oxy-chloride cement flooring.

**DOLESE & SHEPARD COMPANY, Chicago, Illinois.**

- Orthoceras in matrix — Gary, Illinois.

- 1 specimen fossil orthoceras — Gary, Illinois.

**DUMONT, DR. T. A., and ADAMS, H. C., Dumont, Iowa.**

- 5 specimens silver ores.

- 1 specimen gold ore — San Bernardino County, California.

**FARLEY, THOS., and O'TOOLE, MICHAEL, Chicago, Illinois.**

- Skull of *Bison Americanus* — Chicago.

**FIELD, JOSEPH N., EXPEDITION.**

- 6 specimens volcanic tuff — Ambrym, New Hebrides.

**FIELD MUSEUM OF NATURAL HISTORY.**

Collected by O. C. Farrington:

- 1 crystal of orthoclase — Stoneham, Maine.

Collected by H. W. Nichols:

- 1 specimen vegetable mold — Antioch, Illinois.

Purchases:

Bishop Canyon Meteorite.

Scott City meteorite.

- 1 specimen orthoceras.

Set of nine models of diamonds cut from the Cullinan diamond.

Collection of volcanic products from the January, 1912, eruption of Sakurajima.

- Pictures of same.
- 1 etched slice Mt. Edith meteorite.
- Collection illustrating varieties of amber — Prussia.
- Teeth of fossil shark — South Carolina.
- Jaw of modern shark.
- Teeth and tusks of young mastodon — Chesterton, Indiana.
- EDISON LAMP WORKS OF THE GENERAL ELECTRIC COMPANY,  
Chicago, Illinois.
- 10 specimens illustrating all stages of the manufacture of the tungsten  
lamp filament.
- GOODALL, MRS. ELLEN F., Chicago, Illinois.
- 1 fossil fish — Wyoming.
- GREBEL, WENDLER & COMPANY, Geneva, Switzerland.
- 21 specimens minerals (exchange).
- GUILD, H. G., Vale, Oregon.
- 137 specimens fossil shells, moss agate, etc. — Eastern Oregon.
- HARDIN, O. B., Chicago, Illinois.
- 1 specimen black sand — Woods County, Oklahoma.
- ILLINOIS STEEL COMPANY, Chicago, Illinois.
- 4 specimens coke oven by-products — Gary, Indiana.
- KENKEL, L. V., New Plymouth, Idaho.
- 26 specimens minerals and fossils — Eastern Oregon.
- KRANZ, DR. F., Bonn, Germany.
- 1 skull and lower jaw of Zeuglodon osiris — Fayum, Egypt (exchange).
- Mounted skeleton of cave bear (*Ursus spelaeus*) — Triest, Austria  
(exchange).
- LAMB, N. F., Jonesboro, Arkansas.
- 2 elephant teeth — Bay, Arkansas.
- LEE MARBLE WORKS, Lee, Massachusetts.
- 1 polished slab of marble.
- 1 four-inch cube of marble — Lee, Massachusetts.
- MAINE AND NEW HAMPSHIRE GRANITE CORPORATION, Portland,  
Maine.
- 1 cube each of Redstone Pink, Redstone Green, and North Jay White  
granite — North Jay, Maine and Redstone, New Hampshire.
- MANIERRE, GEORGE, Chicago, Illinois.
- Skeleton of the Mammoth — Spokane County, Washington.
- MARSH, C. H., Marshfield, Oregon.
- 2 specimens natrolite — Douglas County, Oregon.
- MCDERMOTT STONE COMPANY, McDermott, Ohio.
- 2 specimens building stone — McDermott, Ohio.
- MEREDITH MINING AND MILLING COMPANY, Libertyville, Illinois.
- 1 specimen crushed feldspar sized for bird grit — Coatesville,  
Pennsylvania.
- THE MICA MILLING AND MANUFACTURING COMPANY, Crawford,  
Nebraska.
- 1 specimen mica.
- 1 specimen ground mica — Crawford, Nebraska.
- THE MT. WALDO GRANITE WORKS, Frankfort, Maine.
- 1 four-inch dressed cube of Mt. Waldo Granite — Mt. Waldo, Maine.



THE NERNST LAMP COMPANY, Pittsburgh, Pennsylvania.

1 Nernst lamp.

NEW YORK STATE MUSEUM, Albany, New York.

2 specimens fossil glass sponge (*Hydnoceras bathense* H. & C.) — Bath, New York.

NICHOLAS, DR. F. C., New York City.

62 specimens ores and lavas — Sonora, Mexico.

NORTH, PROF. H. B., New Brunswick, New Jersey.

6 specimens limonite after marcasite.

1 specimen hematite.

1 specimen iridescent pyrite — Wisconsin and New Jersey (exchange).

NORTH CAROLINA GRANITE CORPORATION, Mt. Airy, North Carolina.

1 dressed block Mt. Airy granite — Mt. Airy, North Carolina.

OHIO QUARRIES COMPANY, Cleveland, Ohio.

1 four-inch dressed cube of Buckeye gray sandstone — Cleveland, Ohio.

PATTEE, FRED, Chicago, Illinois.

1 specimen asbestos — Grand Canyon, Arizona.

PELTZER, ALBERT, Argo, Illinois.

1 specimen *Orthoceras* — Argo, Illinois.

PHENIX MARBLE COMPANY, Kansas City, Missouri.

2 specimens gray marble — Kansas City, Missouri.

PIERCE, HENRY B., Golconda, Illinois.

2 specimens fluorite (1st quality optical) — Golconda, Illinois.

POTTER, LOUIS C., Chicago, Illinois.

1 geode — Mississippi River near St. Louis, Missouri.

RENNE, D. S., Verona, Illinois.

2 septaria — Marseilles, Illinois.

ROCKPORT GRANITE COMPANY, Rockport, Massachusetts.

3 four-inch cubes of granite — Massachusetts and Maine.

ROMANO, JOSEPH, Chicago, Illinois.

1 specimen eroded limestone — Melrose Park, Illinois.

ROYAL ONTARIO MUSEUM OF MINERALOGY, Toronto, Canada.

3 polished specimens of silver ore — Cobalt, Ontario (exchange).

ST. JOHN, C. A., Wayland, New York.

1 marcasite concretion — Ogden, Iowa.

SALTO, DR. A. B., Copenhagen, Denmark.

1 specimen carnotite — Paradox Valley, Colorado.

SALISBURY, PROF. R. D., Chicago, Illinois.

2 fossil tree trunks — Patagonia.

SCOTT, GEO. S., New York City.

13 specimens minerals (exchange).

1 specimen amethyst — Cripple Creek, Colorado (exchange).

SHNABLE AND QUINN, Chicago, Illinois.

1 specimen *Orthoceras* — Calumet-Sag Canal.

SPANISH AMERICAN IRON COMPANY, New York City.

3 specimens iron ore — Cuba.

SOUTH DOVER MARBLE COMPANY, New York City.

1 four-inch cube of white marble, dressed.

1 polished slab of white marble — South Dover, New York.



STEARNS COAL AND LUMBER COMPANY, Stearns, Kentucky.

1 specimen carbonate iron ore — Stearns, Kentucky.

STRAWN, J. E., Silver Star, Montana.

47 specimens of minerals and ores — Tobacco Root Mts., Montana.

THURSTON, DR. FREDUS A., Chicago, Illinois.

Titanium oxide coloring artificial teeth.

UNIVERSAL PORTLAND CEMENT COMPANY, Chicago, Illinois.

5 specimens raw materials and finished Portland cement.

UNIVERSITY OF CALIFORNIA, Berkeley, California.

Skeleton of saber-tooth tiger (*Smilodon neogens*) — Los Angeles, Cal.  
(exchange).

WEBB GRANITE AND CONSTRUCTION COMPANY, Worcester,  
Massachusetts.

3 dressed cubes of granite — Massachusetts and New Hampshire.

WEGG, HAROLD, Chicago, Illinois.

48 specimens minerals, ores and fossils.

WINSTON, CHAS., Chicago, Illinois.

8 specimens carboniferous plants — Pennsylvania and Rhode Island.

## DEPARTMENT OF ZOÖLOGY.

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

ABBOTT, J. B., Chicago, Illinois.

1 moth — Chicago, Illinois.

ALTSHELDER, B., Louisville, Kentucky.

3 ostrich skins.

1 piece of skin (head) of an Oryx.

2 mammals (skins only).

3 mammals (skulls, scalps and skins).

6 mammals (skulls and scalps only).

16 mammals (skulls and entire skins) — British East Africa.

BARKER, MRS. F., Chicago, Illinois.

1 specimen of brain coral.

1 specimen of sea fan.

2 specimens of sponges.

BARNES, JUDGE R. M., Lacon, Illinois.

1 Trumpeter Swan.

1 Whistling Swan.

2 bodies of Trumpeter Swans.

1 body of Whistling Swan.

BEATY, W. L., Homestake, Montana.

2 wolf skulls — Homestake, Montana.

CLARK, B. PRESTON, Boston, Massachusetts.

1 Sphinx Moth — Guerro Mill., Hidalgo, Mexico.

CORWIN, MRS. C. A., Chicago, Illinois.

1 House Wren — Chicago, Illinois.

CORY, MRS. C. B., Chicago, Illinois.

1 box Turtle — Kelsey Lake, Dowagiac, Michigan.



BIRD LIFE ON WALRUS ISLAND, BERING SEA.  
Taxidermy by L. L. Pray. Background painted by C. A. Corwin.



## CURTISS, MISS E., Chicago, Illinois.

- 1 dragonfly — Bahamas.
- 150 butterflies and moths — the World.
- 169 beetles — United States.
- 105 beetles — foreign countries.

## DERBY, W. M., JR., Chicago, Illinois.

- 1 Ruddy Duck — Illinois.

## FIELD MUSEUM OF NATURAL HISTORY.

## Collected by M. P. Anderson:

- 8 mammals — Venezuela.
- 219 bird skins — North West Peru.
  - 1 box of accessory material — Venezuela.
- 182 bird skins — North West Peru.
- 69 mammals.
  - 1 mammal (skin only).
  - 7 mammal skulls — North West Peru.
- 18 bats — Colon and Maracaibo, Venezuela.
- 18 mammals.
  - 4 mammal skulls.
  - 1 bat — Peru.
- 55 bird skins — Peru.
- 50 bird skins — Lake Junin, Peru.
- 16 mammals.
  - 2 mammals (skins only) — Lake Junin, Peru.
  - 1 mammal skull — Salaverry, Peru.
- 4 land shells.
- 5 crustaceans.
- 3 snakes.
- 6 toads.
- 16 lizards.
- 35 fish — Venezuela and Peru.
  - 6 snakes — Chimbote, Peru.
  - 2 lizards — Near Chimbote, Peru.
- 514 spiders, bugs, grasshoppers, crickets, moths, butterflies, beetles, flies, bees, wasps, etc. — Peru, South America.

## Collected by R. H. Becker:

- 1 lantern fly.
- 2 millipedes.
- 4 moth larvæ — Santo Amaro, Bahia, Brazil.
- 1 centipede.
- 1 ear-wig — Northern Trinidad.
- 119 mammals.
  - 16 mammal skulls.
  - 12 mammals (skins only) — Brazil.
- 13 snakes.
  - 1 lizard — Brazil.
- 372 bird skins — Brazil.
- 145 bird skins — Brazil.
- 45 mammals.
- 60 mammals — Rio das Velhas, near Lagoa Santa, Brazil.

- 117 bird skins — Rio Preto Region, Brazil.
- 5 mammals.
- 6 mammal skulls — Trinidad.
- 29 bird skins.
- accessories for group of oil birds (eggs, nests, etc.) — Trinidad.
- 63 mammals.
- 18 mammal skulls.
- 3 mammals (skins only).
- 79 bats — Rio Preto Region, Brazil.
- 11 fish — Junction of Rio Grande and Rio Sao Francisco, Brazil.
- Collected by J. Friesser:
  - 18 bird skins — Kenai Peninsula, Alaska.
- Collected by W. J. Gerhard:
  - 24 dragonflies, bugs, grasshoppers, butterflies, moths, beetles, etc. — Northern Indiana and Northern Illinois.
- Collected by S. E. Meek:
  - 1 caiman — Lake Nicaragua, Nicaragua.
  - 11 bats — Panama.
- Collected by W. H. Osgood and M. P. Anderson:
  - 64 bats — Panama.
- Purchases:
  - 39 Arctic birds — Bering Sea, Alaska and Siberia.
  - 3,321 bird skins — United States.
    - 1 cardinal — Illinois and Wisconsin.
    - 2 song sparrows — Illinois and Wisconsin.
    - 1 giant clam — Madagascar.
    - 1 albino crow.
    - 2 passenger pigeons — Dekalb County, Indiana.
- FIELD, JOSEPH N., Expedition.
  - 599 shells — New Britain and German New Guinea.
- FRIESSER, J., Chicago, Illinois.
  - 1 mammal skull.
- GILLILAND, C. H., Trenary, Michigan.
  - 1 specimen of an abnormal four day old kitten — Trenary, Michigan.
- HANDY, COL. WM. J., Pasadena, California.
  - 1 Venus flower-basket sponge — Philippine Islands.
- HILL, A. L., Sterling, Illinois.
  - 4 plant lice — Rock River, Sterling, Illinois.
- JEONESCN, PROF. THEO., Chicago, Illinois.
  - 1 chimpanzee — Central Africa.
- LEOTANL, FELIX, Port-of-Spain, Trinidad.
  - 1 snake — Near Port-of-Spain, Trinidad.
- LILJEBLAD, E., Chicago, Illinois.
  - 1 mantispa — Palos Park, Illinois.
  - 10 Insects — Edgebrook, Illinois.
  - 2 wasps — Edgebrook, Illinois.
  - 4 bugs — Miller, Indiana.
- MCCORMICK, CYRUS H., Chicago, Illinois.
  - 2 beetles — Brazil.
- MESSINGER, JOE, Chicago, Illinois.
  - 1 albino mandril.



- MILLSPAUGH, MRS. C. F., Chicago, Illinois.  
19 spiders — Ephraim, Door County, Wisconsin.
- MILLSPAUGH, C. F., Chicago, Illinois.  
1 mayfly — Chicago, Illinois.
- NOTTER, MISS M., Chicago, Illinois.  
1 roach — Chicago, Illinois (ex Tropics).
- PAXON, MAHLAN, Bluffton, Indiana.  
1 mandarin duck.
- PIKE, EUGENE S., Chicago, Illinois.  
1 pair elk horns.
- PILE, JAMES H., Wayne, Nebraska.  
1 map terrapin — Wayne, Nebraska.
- PORTER, A. F., Decorah, Iowa.  
1 beetle — British Guiana, South America.  
27 beetles — West Indies.
- PRAY, L. L., Chicago, Illinois.  
25 bird lice — Chicago, Illinois.
- SASKO, PROF. V. G., Chicago, Illinois.  
2 spider wasps — Ogden, Utah.
- SETON, ERNEST T., Greenwich, Connecticut.  
2 weasels.  
2 stoats.  
2 red-backed mice.  
4 wood mice — England (exchange).
- SIEGEL COOPER & COMPANY, Chicago, Illinois.  
1 monkey — South America.  
1 South African baboon — South Africa.
- SKINNER, DR. HENRY, Philadelphia, Pennsylvania.  
2 butterflies — Beaver Canyon, Idaho.
- STODDARD, H. L., Chicago, Illinois.  
1 Say's bat — Sumpter, Sauk County, Wisconsin.  
5 fleas — Miller, Indiana.  
10 fleas — Willow Springs, Illinois.
- WALTERS, L. L., Chicago, Illinois.  
3 fleas — Chicago, Illinois.
- WEGG, HAROLD, Chicago, Illinois.  
1 box of bird eggs (205) — Colorado.
- WILLIAMSON, E. B., Bluffton, Indiana.  
1 young red-shouldered hawk — Bluffton, Indiana.  
1 young red-tailed hawk — Bluffton, Indiana.  
1 Canada goose.  
1 common loon — Bluffton, Indiana.  
1 barn owl — Bluffton, Indiana.  
1 red-shouldered hawk — Bluffton, Indiana.  
1 red-tailed hawk — Bluffton, Indiana.  
1 yellow billed cuckoo — Bluffton, Indiana.  
1 horned owl — Bluffton, Indiana.  
1 bittern — Bluffton, Indiana.
- WOLCOTT, A. B., Chicago, Illinois.  
5 insects — Chicago, Illinois.  
4 beetles — Beverly Hills, Illinois.



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100 landscapes, birds, etc. — South America.

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Agricultural Experiment Station, Fayetteville . . . . .	2
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Minnesota Academy of Sciences, Minneapolis . . . . .	2
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State University, Columbus . . . . .	5
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Philadelphia Numismatics and Antiquarian Society, Philadelphia . . . . .	1
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Wagner Free Institute of Science, Philadelphia . . . . .	2
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Wyoming Historical and Geological Society, Wilkesbarre . . . . .	1

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Department of the Interior, Bureau of Science, Manila . . . . .	7

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State Geological and Biological Survey, Vermilion . . . . .	1



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State Geological Survey, Nashville . . . . .	19

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Agricultural Experiment Station, Logan . . . . .	6
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Virginia State Library, Richmond . . . . .	3

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State Library, Seattle . . . . .	2
State Museum, Seattle . . . . .	1

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Alexander, Charles P., Ithaca, New York . . . . .	1
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Heller, A. A., Chico, California . . . . .	1
Hopkins, T. C., Syracuse, New York . . . . .	1
Kearney, T. H., Washington, D. C. . . . .	1
Laufer, Berthold, Chicago (gift) . . . . .	9
Lewis, A. B., Chicago (gift) . . . . .	17
Lindley, Curtis H., San Francisco, California (gift) . . . . .	3
Marks, E. L., Cambridge, Massachusetts . . . . .	19
Meek, Mrs. Seth E., Chicago (gift) . . . . .	3
Millspaugh, Charles F., Chicago . . . . .	82
Mitchell, Alexander N., Minneapolis, Minnesota . . . . .	1
Muller, Hugo, Manila, Philippine Islands . . . . .	1
Osborn, Henry F., New York City . . . . .	54
Pellett, Frank C., Atlantic, Iowa (gift) . . . . .	5
Rehn, James A. G., Philadelphia, Pennsylvania . . . . .	1
Schubert, Charles, New Haven, Connecticut . . . . .	41
Simms, S. Chapman, Chicago (gift) . . . . .	187
Skinner, Henry, Philadelphia, Pennsylvania . . . . .	1
Smith, Huron H., Chicago (gift) . . . . .	9
Smith, J. D., Baltimore, Maryland . . . . .	1
Starr, Frederick, Chicago . . . . .	13
Strong, R. M., Chicago . . . . .	3
Taubenhaus, J. J., Newark, Delaware (gift) . . . . .	2
Thompson, Joseph G., Sausalites, California (gift) . . . . .	13
Vandenberg, J., Berkeley, California . . . . .	4
Washington, Henry S., Washington, D. C. . . . .	11
Weller, Stuart, Chicago . . . . .	1
Wickham, H. F., Philadelphia, Pennsylvania . . . . .	1
Williamson, E. B., Bluffton, Indiana (gift) . . . . .	7
Williston, Samuel W., Chicago . . . . .	7
Wyer, Raymond, Muskegon, Michigan (gift) . . . . .	1

## AFRICA

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Botanic Society, Pietermaritzburg, Natal . . . . .	1
Department of Agriculture, Cape Town . . . . .	2
Department of Mines, Pretoria, Transvaal . . . . .	1
East Africa and Uganda Natural History Society, Nairobi . . . . .	1
Geological Society, Johannesburg . . . . .	2
Institut de Carthage, Tunis . . . . .	1
Rhodesia Scientific Association, Bulawayo . . . . .	1
Royal Society, Cape Town . . . . .	1
South African Museum, Cape Town . . . . .	1
Transvaal Museum, Pretoria . . . . .	1

## ARGENTINA

Facultad de Filosofia y Letras, Buenos Aires . . . . .	1
Museum de La Plata, La Plata . . . . .	3
Museo Nacional, Buenos Aires . . . . .	2
Universidad Nacional de La Plata, Buenos Aires . . . . .	6

## AUSTRALIA

Australian Ornithologist's Union, Melbourne . . . . .	1
Botanic Gardens and Government Domains, Sydney . . . . .	4
Department of Agriculture, Adelaide . . . . .	2
Department of Agriculture, Melbourne . . . . .	1
Department of Agriculture, Sydney . . . . .	3
Department of Agriculture, Hobart, Tasmania . . . . .	1
Department of Fisheries, Sydney . . . . .	1
Department of Mines, Sydney . . . . .	3
Field Naturalists' Club, Brisbane . . . . .	1
Field Naturalists' Club, Melbourne . . . . .	1
Geological Survey, Perth . . . . .	7
Government of the Commonwealth, Melbourne . . . . .	5
Linnean Society of New South Wales, Sydney . . . . .	1
Melbourne University, Melbourne . . . . .	1
National Museum, Melbourne . . . . .	1
Natural History and Scientific Society, Perth . . . . .	2
Public Library, Museum and Art Gallery, Adelaide . . . . .	1
Queensland Museum, Brisbane . . . . .	3
Royal Anthropological Society of Australasia, Sydney . . . . .	3
Royal Society, Hobart, Tasmania . . . . .	21
Royal Society of New South Wales, Sydney . . . . .	1
Royal Society of Queensland, Brisbane . . . . .	1
Royal Zoölogical Society of New South Wales, Sydney . . . . .	1
South Australian Ornithological Association, Adelaide . . . . .	1
Technical Museum, Sydney . . . . .	1
Western Australian Museum and Art Gallery, Perth . . . . .	1

## AUSTRIA

K. K. Franz-Josephs-Universität, Czernowitz . . . . .	1
K. K. Naturhistorisches Hofmuseum, Vienna . . . . .	1
K. K. Zoologisch-Botanische Gesellschaft, Vienna . . . . .	1
Naturhistorisches Landesmuseum von Kärnten, Klagenfurt . . . . .	1
Naturwissenschaftlicher Verein, Vienna . . . . .	1



Naturwissenschaftlicher Verein für Steiermark, Graz . . . . .	13
Verein für Höhlenkunde in Österreich, Graz . . . . .	1
AUSTRIA-HUNGARY	
K. Akademie der Wissenschaften, Cracow . . . . .	1
Kir. Magyar-Természettudományi Társulat, Budapest . . . . .	1
Magyar Ornithologiai Zözpont, Budapest . . . . .	1
Ungar. Akademie der Wissenschaft, Budapest . . . . .	2
BELGIUM	
Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique, Brussels . . . . .	2
Institut Géologique, Louvain . . . . .	1
Instituts Solvay, Brussels . . . . .	4
Jardin Botanique de L'Etat, Brussels . . . . .	2
Musée Royal d'Histoire Naturelle de Belgique, Brussels . . . . .	1
Musées Royaux des Arts Décoratifs et Industriels, Brussels . . . . .	1
Société d'Archéologie, Brussels . . . . .	2
Société Royale de Botanique de Belgique, Brussels . . . . .	1
BOHEMIA	
Böhm. Naturw. Landesdurchforschung, Prague . . . . .	1
Deutscher Naturwissenschaftlich-Medizinischer Verein für Böhmen "Lotos," Prague . . . . .	
Königlich-Böhmisches Museum, Prague . . . . .	11
BORNEO	
Sarawak Museum, Sarawak . . . . .	2
BRAZIL	
Campinas Centro de Ciencia, Sao Paulo . . . . .	1
Instituto Agronomico de Estado, Sao Paulo . . . . .	1
Museu Goeldi, Para . . . . .	2
Museu Paulista, Sao Paulo . . . . .	3
Sociedade Scientifica, Sao Paulo . . . . .	1
CANADA	
Department of Agriculture, Ottawa . . . . .	12
Department of Agriculture, Victoria . . . . .	5
Department of Indian Affairs, Ottawa . . . . .	2
Department of the Interior, Geological Survey, Ottawa . . . . .	29
Department of Lands, Victoria . . . . .	1
Department of Marine and Fisheries, Ottawa . . . . .	3
Department of Mines, Ottawa . . . . .	1
Department of Mines, Victoria . . . . .	2
McGill University, Montreal . . . . .	4
Minister of Education, Toronto . . . . .	2
Naturaliste Canadien, Chicoutimi . . . . .	1
Numismatic and Antiquarian Society, Montreal . . . . .	1
Ottawa Field Naturalists' Club, Ottawa . . . . .	1
Provincial Museum, Victoria . . . . .	2
Royal Society, Toronto . . . . .	1
CEYLON	
Ceylon Agricultural Society, Colombo . . . . .	1
Colombo Museum, Colombo . . . . .	2
Royal Botanic Gardens, Peradeniya . . . . .	3



## CHILE

Biblioteca Nacional, Santiago de Chile . . . . .	4
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## CHINA

Botanical and Forestry Department, Hongkong . . . . .	1
Royal Asiatic Society, North China Branch, Shanghai . . . . .	33

## COSTA RICA

Museo Nacional, San José . . . . .	1
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## CUBA

Agricultural Experiment Station, Porto Rico . . . . .	1
Biblioteca Nacional, Havana . . . . .	2
Estacion Central Agronomico, Santiago de las Vegas . . . . .	1
Universidad de La Habana, Havana . . . . .	2

## DENMARK

Botanical Garden, Copenhagen . . . . .	4
Naturhistorisk Forening, Copenhagen . . . . .	4
Société Botanique de Copenhagen, Copenhagen . . . . .	1
Société Royale des Antiquaires du Nord, Copenhagen . . . . .	1

## ECUADOR

Biblioteca Municipal, Guayaquil . . . . .	7
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## EGYPT

Egyptian Government School of Medicine, Cairo . . . . .	3
Institut Egyptien, Cairo . . . . .	1
Survey Department, Giza . . . . .	1

## ENGLAND

Anthropological Institute of Great Britain and Ireland, London . . . . .	1
Ashmolean Natural History Society of Oxfordshire, Oxford . . . . .	1
Birmingham Natural History and Philosophical Society, Birmingham . . . . .	2
Brighton and Hove Natural History and Philosophical Society, Brighton . . . . .	1
British Association for the Advancement of Science, London . . . . .	1
British Museum, London . . . . .	8
British Museum (Natural History), London . . . . .	5
Cambridge Philosophical Society, Cambridge . . . . .	2
Cambridge University Library, Cambridge . . . . .	8
Cheltenham Public Library, Art Gallery and Museum, Cheltenham . . . . .	1
Croydon Natural History and Scientific Society, Croydon . . . . .	1
Ealing Scientific and Microscopical Society, London . . . . .	1
Entomological and Natural History Society, London . . . . .	1
Great Britain Geological Survey, London . . . . .	2
Horniman Museum, London . . . . .	2
Hull Municipal Museum, Hull . . . . .	4
Imperial Bureau of Entomology, London . . . . .	2
Imperial College of Science and Technology, London . . . . .	1
Japan Society, London . . . . .	3
Lancashire Sea Fisheries Laboratory, Liverpool . . . . .	1
Linnean Society, London . . . . .	3
Liverpool Biological Society, Liverpool . . . . .	1
Liverpool Geological Society, Liverpool . . . . .	1
Liverpool Marine Biological Station, Liverpool . . . . .	1
London Library, London . . . . .	3
London Zoölogical Society, London . . . . .	3

Manchester Field Naturalists' and Archæologists' Society, Manchester . . . . .	1
Manchester Museum, Manchester . . . . .	1
Marine Biological Association of the United Kingdom, Plymouth . . . . .	1
Natural History Society of Northumberland, Durham and Newcastle-on-Tyne . . . . .	2
Oxford Delegates of University Museum, Oxford . . . . .	1
Plymouth Institute, Plymouth . . . . .	1
Royal Archæological Institute of Great Britain and Ireland, London . . . . .	1
Royal Botanic Gardens, Kew . . . . .	2
Royal Colonial Institute, London . . . . .	1
Royal Cornwall Polytechnic Society, Falmouth . . . . .	1
Royal Geographical Society, London . . . . .	2
Royal Horticultural Society, London . . . . .	1
Royal Society, London . . . . .	2
Royal Society of Arts, London . . . . .	2
Scientific and Field Naturalists' Club, Hull . . . . .	1
South London Entomological and Natural History Society, London . . . . .	1
Tring Zoological Museum, Tring . . . . .	1
University College, London . . . . .	1
Wellcome Chemical Research Laboratories, London . . . . .	7

## FRANCE

Académie des Sciences, Paris . . . . .	2
Annales des Mines, Paris . . . . .	2
L'Association des Naturalistes, Levallois-Perret . . . . .	2
École d'Anthropologie, Paris . . . . .	1
École des Langues Orientales Vivantes, Paris . . . . .	7
Faculté des Sciences, Marseille . . . . .	1
Laboratoire de Zoologie et de Physiologie Maritimes, Concarneau . . . . .	21
Ministère de l'Instruction Publique et des Beaux Arts, Paris . . . . .	1
Musée d'Histoire Naturelle, Paris . . . . .	1
Museum d'Histoire Naturelle, Marseille . . . . .	6
Museum d'Histoire Naturelle et d'Ethnographie, Havre . . . . .	1
Revue Bretonne de Botanique, Rennes . . . . .	1
Revue Critique de Paléozoologie, Paris . . . . .	1
Revue Scientifique du Bourbonnais et du Centre de la France, Moulins . . . . .	1
Société Botanique de France, Paris . . . . .	3
Société d'Études des Sciences Naturelles, Rheims . . . . .	
Société d'Histoire Naturelle, Colmar . . . . .	1
Société d'Histoire Naturelle des Ardennes, Charleville . . . . .	1
Société de Géographie, Paris . . . . .	1
Société de Géographie, Toulouse . . . . .	1
Société d'Horticulture et de Botanique, Marseille . . . . .	1
Société des Américanistes, Paris . . . . .	1
Société des Études Scientifiques, Angers . . . . .	2
Société des Sciences de Nancy, Nancy . . . . .	1
Société des Sciences Naturelles, La Rochelle . . . . .	1
Société Géologique du Nord, Lille . . . . .	1
Société Nationale d'Agriculture, Paris . . . . .	1
Société Nationale d'Agriculture, Sciences et Arts, Angers . . . . .	1
Société Nationale d'Horticulture, Paris . . . . .	1
Société Zoologique de France, Paris . . . . .	1

## GERMANY

Bayerische Botanische Gesellschaft, Munich . . . . .	2
Botanische Staatsinstitute, Hamburg . . . . .	4
Botanischer Verein, Brandenburg . . . . .	1
Botanischer Verein, Königsberg . . . . .	11
Deutsche Dendrologische Gesellschaft, Bonn-Poppelsdorf . . . . .	21
Deutsche Geologische Gesellschaft, Berlin . . . . .	4
Deutsche Gesellschaft für Anthropologie, Ethnologie und Urgs., Berlin . . . . .	1
Deutsche Gesellschaft für Volkstümliche Naturkunde, Berlin . . . . .	2
Deutscher Seefischerei-Verein, Berlin . . . . .	2
Deutsches Entomologisches Museum, Berlin . . . . .	3
Geographische Gesellschaft, Hamburg . . . . .	1
Geographische Gesellschaft, Lübeck . . . . .	1
Gesellschaft für Anthropol. und Urgeschichte der Oberlausitz, Görlitz . . . . .	1
Gesellschaft für Beförderung der Gesamten Naturwissenschaften, Marburg . . . . .	1
Gesellschaft für Erdkunde, Berlin . . . . .	2
Institut für Mineralogie und Petrographie, Leipzig . . . . .	1
Jahres-Verzeichnis der an den Deutschen Univ. Erschienenenschriften, Berlin . . . . .	1
Kaiser Wilhelms Universität, Strassburg . . . . .	1
K. Bayer. Akademie der Wissenschaften, Munich . . . . .	5
K. Bayer. Ludwig-Maximilians-Universität, Munich . . . . .	3
K. Bergakademie, Clausthal . . . . .	1
K. Bibliothek, Berlin . . . . .	2
K. Botanischer Garten und Museum, Berlin . . . . .	2
K. Georg-Augustus Universität, Göttingen . . . . .	5
K. Museum für Völkerkunde, Berlin . . . . .	3
K. Preussische Akademie der Wissenschaften, Berlin . . . . .	2
K. Sächs. Bergakademie, Freiburg . . . . .	1
K. Sächs. Gesellschaft der Wissenschaften, Leipzig . . . . .	3
K. Sammlungen für Kunst und Wissenschaft, Dresden . . . . .	2
K. Zoologisches und Anthropologisch-Ethnographisches Museum, Dresden . . . . .	2
Nassauischer Verein für Naturkunde, Wiesbaden . . . . .	1
Naturforschende Gesellschaft, Freiburg . . . . .	3
Naturhistorische Gesellschaft, Hannover . . . . .	1
Naturhistorische Gesellschaft, Nuremberg . . . . .	2
Naturhistorischer Verein, Bonn . . . . .	3
Naturhistorisches Museum, Hamburg . . . . .	3
Naturwissenschaftliche Gesellschaft "Isis," Dresden . . . . .	1
Naturwissenschaftlicher Verein für Schleswig-Holstein, Kiel . . . . .	1
Naturwissenschaftlicher Verein für Schwaben und Neuburg, Augsburg . . . . .	2
Naturwissenschaftliches Museum, Crefeld . . . . .	3
Schlesische Gesellschaft für Vaterländische Kultur, Breslau . . . . .	2
Senckenbergische Naturforschende Gesellschaft, Frankfurt a. M. . . . .	8
Stadt Bibliothek, Hannover . . . . .	1
Thüringischer Botanischer Verein, Weimar . . . . .	1
Universitäts Bibliothek, Bonn . . . . .	29
Universitäts Bibliothek, Kiel . . . . .	1
Verein für Erdkunde, Darmstadt . . . . .	2
Verein für Erdkunde, Leipzig . . . . .	2

Verein für Volkskunde, Berlin . . . . .	2
Wissenschaftliche Anstalten, Hamburg . . . . .	3
Zoologisches Institut der Universität, Strassburg . . . . .	2
Zoologisches Museum, Berlin . . . . .	2

## INDIA

Agri-Horticultural Society, Madras . . . . .	1
Anthropological Society, Bombay . . . . .	1
Archæological Survey, Burma . . . . .	1
Archæological Survey, Calcutta . . . . .	7
Asiatic Society of Bengal, Calcutta . . . . .	2
Baluchistan Forest Administration, Calcutta (gift) . . . . .	19
Department of Agriculture, Bombay . . . . .	1
Department of Agriculture, Madras . . . . .	4
Department of Agriculture, Pusa . . . . .	2
Geological Survey, Calcutta . . . . .	5
Indian Museum, Calcutta . . . . .	5
Royal Botanic Garden, Calcutta . . . . .	1

## IRELAND

Belfast Natural History and Philosophical Society, Belfast . . . . .	1
Belfast Naturalists' Field Club, Belfast . . . . .	1
Department of Agriculture, Fisheries Branch, Dublin . . . . .	2
National Museum of Science and Art, Dublin . . . . .	3
Royal Dublin Society, Dublin . . . . .	3
Royal Irish Academy, Dublin . . . . .	7
Royal Zoölogical Society, Dublin . . . . .	2
Trinity College, Dublin . . . . .	2

## ITALY

Accademia di Scienze, Acireale . . . . .	1
Accademia Reale delle Scienze, Turin . . . . .	1
American Society, Rome . . . . .	1
Museo de Zoologia et di Anatomie Comparata, Turin . . . . .	1
R. Accademia dei Lincei, Rome . . . . .	2
R. Accademia delle Scienze, Naples . . . . .	2
R. Orto Botanico e Giardino Coloniale, Palermo . . . . .	1
R. Scuola Superiore d'Agricoltura, Portici . . . . .	1
Società di Naturalisti, Naples . . . . .	1
Società Geografica Italiana, Rome . . . . .	1
Società Italiana di Antropologia, Florence . . . . .	1
Società Romana di Antropologia, Rome . . . . .	1
Società Toscana di Scienze Naturali, Pisa . . . . .	2

## JAMAICA

Department of Agriculture, Kingston . . . . .	1
Jamaica Institute, Kingston . . . . .	1

## JAPAN

Anthropological Society of Tokyo, Tokyo . . . . .	1
Bureau of Productive Industry Formosa Government, Taihoku . . . . .	1
Deutsche Gesellschaft für Natur- und Volkerkunde Ostasiens, Tokyo . . . . .	1
Geological Survey, Tokyo . . . . .	1
Imperial University of Tokyo, College of Science, Tokyo . . . . .	7

Tohoku Imperial University, Sendai . . . . .	1
Tokyo Botanical Society, Tokyo . . . . .	1
JAVA	
Bataviaasch Genootschap van Kunsten en Wetenschappen, Batavia . . .	5
Department of Agriculture, Buitenzorg . . . . .	9
Nederlandsch-Indie K. Institut Taal-Land-en Volkenkunde, Batavia . . .	2
MEXICO	
Direccion General de Estadistica, Mexico . . . . .	8
Instituto Geologico de Mexico, Mexico . . . . .	1
Museo Nacional de Arqueologia, Historia y Etnologia, Mexico . . . . .	2
Sociedad Cientifico "Antonio Alzate," Mexico . . . . .	2
NETHERLANDS	
K. Akademie van Wetenschappen, Amsterdam . . . . .	8
Museum voor Land-en Volkenkunde, Rotterdam . . . . .	1
Nederlandsche Dierkundige Vereeniging, Leiden . . . . .	2
Rijks Ethnographisches Museum, Leiden . . . . .	16
Rijks Herbarium, Leiden . . . . .	2
Stats Bibliotheek, Haarlem . . . . .	1
Universiteit van Amsterdam, Amsterdam . . . . .	1
NEW ZEALAND	
Acclimatization Society, Wellington . . . . .	1
Department of Agriculture, Wellington . . . . .	2
Department of Mines, Wellington . . . . .	1
Dominion Museum, Wellington . . . . .	2
NORWAY	
Bergen Museum . . . . .	1
PERU	
Cuerpo de Ingenieros de Minas, Lima . . . . .	1
Sociedad Geografica, Lima . . . . .	1
PORTUGAL	
Academia Real das Sciencias, Lisbon . . . . .	7
Collegio de S. Fiel, Lisbon . . . . .	2
Société Portugaise de Sciences Naturelles, Lisbon . . . . .	3
ROUMANIA	
Jassy Institute, Jassy . . . . .	1
RUSSIA	
Académie Impériale des Sciences, Petrograd . . . . .	16
Imperial Botanical Gardens, Petrograd . . . . .	1
Kaukasisches Museum, Tiflis . . . . .	2
Societas pro Fauna et Flora Fennica, Helsingfors . . . . .	1
Société Impériale des Naturalistes, Moscow . . . . .	3
Société Impériale des Naturalistes, Petrograd . . . . .	1
Société Impériale Russe de Géographie, Petrograd . . . . .	1
Société Ouralienne d'Amateurs des Sciences Naturelles, Ekaterinburg . . .	1
SCOTLAND	
Fishery Board, Edinburgh . . . . .	1
Natural History Society, Glasgow . . . . .	1
Perthshire Society of Natural Science, Perth . . . . .	1



Royal Botanic Garden, Edinburgh . . . . .	31
Royal Scottish Museum, Edinburgh . . . . .	1
Royal Society, Edinburgh . . . . .	2
SPAIN	
Broteria, Salamanca . . . . .	2
Museo de Ciencias Naturales, Madrid . . . . .	2
R. Academia de Ciencias, Madrid . . . . .	2
Sociedad Española de Historia Natural, Madrid . . . . .	2
SWEDEN	
K. Biblioteket, Stockholm . . . . .	1
K. Svenska Vetenskapsakademien, Stockholm . . . . .	6
K. Vitt. Hist. och Antik. Akademien, Stockholm . . . . .	1
Regia Societas Scientiarum, Upsala . . . . .	1
Svenska Sällskapet för Antropologi och Geografi, Stockholm . . . . .	1
Upsala University, Upsala . . . . .	3
SWITZERLAND	
Conservatoire et Jardin Botaniques, Geneva . . . . .	2
Geographisch-Ethnographische Gesellschaft, Zürich . . . . .	1
Musée Ethnographique, Neuchâtel . . . . .	1
Musée Zoologique, Lausanne . . . . .	1
Naturforschende Gesellschaft, Basel . . . . .	1
Naturforschende Gesellschaft, Bern . . . . .	1
Ostsch. Geograph. Comm. Gesellschaft, St. Gall . . . . .	1
Société de Physique et d'Histoire Naturelle, Geneva . . . . .	1
Société Helvétique des Sciences Naturelles, Bern . . . . .	1
Société Neuchâteloise de Géographie, Neuchâtel . . . . .	2
Société Vaudoise des Sciences Naturelles, Lausanne . . . . .	2
Société Zoologique, Geneva . . . . .	1
VENEZUELA	
Museos Nacionales, Caracas . . . . .	2
WALES	
National Museum of Wales, Cardiff . . . . .	1
WEST INDIES	
Imperial Department of Agriculture, Barbadoes . . . . .	2
YUCATAN	
La Camera Agricultura, Merida . . . . .	1
Capitan, L., Paris, France . . . . .	1
Carpenter, G. N., Dublin, Ireland . . . . .	1
Caziot, C., Nice, Italy (gift) . . . . .	6
Errera, Leo, Brussels, Belgium . . . . .	1
Ewart, Alfred L., Melbourne, Australia . . . . .	8
Fried, Alfred H., Berlin, Germany . . . . .	1
Friedländer, R., und Sohn, Berlin, Germany . . . . .	2
Fürbringer, Max, Jena, Germany . . . . .	1
Gennep, A. van, Neuchâtel, Switzerland . . . . .	2
Gleerup, G. W. K., Lund, Sweden . . . . .	1
Gota, Se Faro, Tokyo, Japan . . . . .	1
Gurney, J. H., Norfolk, England . . . . .	3
Hamburg, Alexander, Upsala, Sweden . . . . .	12



Hartland, Edwin Sidney, England . . . . .	1
Hasse, C., Breslau, Germany . . . . .	2
Hayrén, Ernst, Helsingfors, Russia (gift) . . . . .	1
Heck, Ludwig, Germany . . . . .	1
Janet, Charles, Paris, France . . . . .	2
Joly, Henri L., London, England . . . . .	3
Joyce, Thomas A., London, England . . . . .	5
Koch-Grünberg, Theodor, Freiburg, Germany . . . . .	4
Lenz, Rüdolfo, Santiago de Chile, Chile . . . . .	4
Ling Roth, H., Halifax, England . . . . .	2
MacRitchie, David, Edinburgh, Scotland . . . . .	3
Maiden, J. H., Sydney, Australia . . . . .	1
Matschie, Paul, Berlin, Germany . . . . .	6
Merzbacher, Gottfried, Munich, Germany . . . . .	2
Mogdigliani, E., Florence, Italy . . . . .	1
Northcote, Thomas W., London, England . . . . .	9
Outes, Felix F., Buenos Aires, Argentina . . . . .	4
Pearcey, F. Gordon, Edinburgh, Scotland (gift) . . . . .	1
Rinné, F., Leipzig, Germany . . . . .	1
Rivet, P., Paris, France . . . . .	1
Sapir, Edward, Montreal, Canada . . . . .	4
Sapper, Karl, Strassburg, Germany . . . . .	3
Schlagenhaufen, Otto, Zürich, Switzerland . . . . .	2
Schmidt, P. W., Mödling, Austria . . . . .	1
Smith, Harlan I., Ottawa, Canada . . . . .	1
Torres, Luis Maria, Buenos Aires, Argentina . . . . .	1
Trouessart, E., Paris, France . . . . .	5
Tuzson, Johann, Budapest, Austria-Hungary (gift) . . . . .	3
Virchow, Hans, Berlin, Germany . . . . .	1
Wegner, Richard N., Munich, Germany . . . . .	2
Weigel, Oswald, Leipzig, Germany (gift) . . . . .	1
Wülfig, E. A., Heidelberg, Germany . . . . .	2
Wille, N., Christiania, Norway . . . . .	2
Wood, Henry Trueman, England (gift) . . . . .	1
Zimanyi, Karl, Budapest, Austria-Hungary . . . . .	1



MARBLE HEAD OF TAOIST GOD OF CREATION, CHINA, T'ANG PERIOD (618-906).  
The Mrs. T. B. Blackstone Expedition.



## ARTICLES OF INCORPORATION

## STATE OF ILLINOIS.

DEPARTMENT OF STATE.

WILLIAM H. HINRICHSEN, *Secretary of State.*

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

*Whereas*, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

*Now, therefore*, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

*In Testimony Whereof*, I hereto set my hand and cause to be affixed the Great Seal of the State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSEN,

[SEAL.]

*Secretary of State.*

TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archæology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(Signed),

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohlfaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, George F. Bissell, John R. Walsh, Chas. Fitzsimons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS }  
COOK COUNTY } ss.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,  
[SEAL.] NOTARY PUBLIC, COOK COUNTY, ILL.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.



## AMENDED BY-LAWS.

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(FEBRUARY 10, 1913.)

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## ARTICLE I.

## MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

*First.*—Free admittance for the member and family, to the Museum on any day.

*Second.*—Ten tickets every year, admitting the bearer to the Museum on pay days.

*Third.*—A copy of all publications of the Museum when requested.

*Fourth.*—Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons or Honorary Members shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars (\$500.00), at any one time, shall, upon the unanimous vote of the Board, become a Life Member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.



SEC. 6. Honorary Members shall be chosen by the Board from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

## ARTICLE II.

### BOARD OF TRUSTEES.

SECTION 1. The Board of Trustees shall consist of fifteen members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled at a regular meeting of the Board, upon the nomination of the Executive Committee made at a preceding regular meeting, by a majority vote of the members of the Board present.

SEC. 2. Regular meetings of the Board shall be held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

## ARTICLE III.

### HONORARY TRUSTEES.

SECTION 1. As a mark of respect, and in appreciation of services performed for the Institution, those Trustees who by reason of inability, on account of change of residence, or for other cause, or from indisposition to serve longer in such capacity, shall resign their place upon the Board, may be elected, by a majority of those present at any regular meeting of the Board, an Honorary Trustee for life. Such Honorary Trustee will receive notice of all meetings of the Board of Trustees, whether regular or special, and will be expected to be present at all such meetings and participate in the deliberations thereof, but an Honorary Trustee shall not have the right to vote.

## ARTICLE IV.

### OFFICERS.

SECTION 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary, and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

## ARTICLE V.

## THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation, except as hereinafter provided. He shall make disbursements only upon warrants drawn by the Director and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrants shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed. It shall be no part of the duties of the Treasurer to see that the warrants have been issued in conformity with such vouchers.

SEC. 2. The securities and muniments of title belonging to the corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer, except as hereinafter provided. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SEC. 3. The Treasurer shall give bond in such amount, and with such sureties, as shall be approved by the Board of Trustees.

SEC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director, and the Chairman of the Administration Committee. All vouchers executed for expenditures for the construction or reconstruction of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

SEC. 5. The Harris Trust and Savings Bank of Chicago shall be Custodian of "The N. W. Harris Public School Extension of Field Museum" fund. The Bank shall make disbursements only upon warrants drawn by the Curator of "The N. W. Harris Public School Extension of Field Museum of Natural History" and countersigned by the Auditor of Field Museum of Natural History. In the absence or inability of the said officers, warrants may be signed by such officers as shall be authorized by special resolution of the Board of Trustees of Field Museum of Natural History. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved by the officers above designated. It shall be no part of the duties of the Bank to see that the warrants have been issued in conformity with such vouchers.

## ARTICLE VI.

## THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of the Museum, and shall control the operations of the insti-

## ARTICLE X.

SECTION 1. Whenever the word "Museum" is employed in the By-Laws of the Corporation, it shall be taken to mean the building in which the Museum as an Institution is located and operated, the material exhibited, the material in study collections, or in storage, furniture, fixtures, cases, tools, records, books, and all appurtenances of the Institution, and the workings, researches, installations, expenditures, field work, laboratories, library publications, lecture courses, and all scientific and maintenance activities.

SEC. 2. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.

## HONORARY MEMBERS.

EDWARD E. AYER  
HARLOW N. HIGINBOTHAM  
CHARLES B. CORY

STANLEY McCORMICK  
MRS. TIMOTHY B. BLACKSTONE  
NORMAN W. HARRIS

### DECEASED.

ROBERT F. CUMMINGS  
GEORGE M. PULLMAN  
MARY D. STURGES

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## PATRONS.

ALLISON V. ARMOUR  
ERNEST R. GRAHAM  
NORMAN W. HARRIS  
VERNON SHAW KENNEDY  
GEORGE MANIERRE

JOHN S. MILLER  
JOHN BARTON PAYNE  
FREDERICK W. PUTNAM  
FREDERICK J. V. SKIFF  
WILLARD A. SMITH

### DECEASED.

DANIEL H. BURNHAM  
JOSEPH N. FIELD

WILLIAM I. BUCHANAN  
EDWIN WALKER

## CORPORATE MEMBERS.

ADAMS, GEORGE E.	HIGINBOTHAM, H. N.
ALDIS, OWEN F.	HUTCHINSON, CHARLES L.
ARMOUR, ALLISON V.	JONES, ARTHUR B.
AYER, EDWARD E.	KENNEDY, VERNON SHAW
BARTLETT, A. C.	KOHLSAAT, HERMAN H.
BLACK, JOHN C.	LATHROP, BRYAN
BLAIR, WATSON F.	McCORMICK, CYRUS H.
BUTLER, EDWARD B.	MANIERRE, GEORGE
CHALMERS, W. J.	MILLER, JOHN S.
CHATFIELD-TAYLOR, H. C.	MITCHELL, JOHN J.
CLARK, JOHN M.	PAYNE, JOHN BARTON
CRANE, RICHARD T.	PECK, FERD. W.
EASTMAN, SIDNEY C.	PORTER, GEORGE F.
ELLSWORTH, JAMES W.	PUTNAM, FREDERICK W.
FIELD, MARSHALL III	REAM, NORMAN B.
FIELD, STANLEY	RYERSON, MARTIN A.
GAGE, LYMAN J.	SKIFF, FREDERICK J. V.
GETTY, HENRY H.	SMITH, WILLARD A.
GRAHAM, ERNEST R.	SPRAGUE, A. A.
GUNSAULUS, FRANK W.	SPRAGUE, A. A., 2D.
GUNTHER, C. F.	STONE, MELVILLE E.
HARRIS, NORMAN W.	

---

## DECEASED.

ARMOUR, PHILIP D.	LEITER, L. Z.
BAKER, WILLIAM T.	McCAGG, E. B.
BISSEL, GEORGE F.	McCLURG, A. C.
BLATCHFORD, E. W.	McNALLY, ANDREW
BUCHANAN, W. I.	PATTERSON, ROBERT W.
BUCKINGHAM, EBENEZER	PEARCE, J. IRVING
BURNHAM, DANIEL H.	PETERSON, ANDREW
CRAWFORD, ANDREW	PULLMAN, GEORGE M.
CURTIS, WILLIAM E.	SCHNEIDER, GEORGE
DAVIS, GEORGE R.	SCOTT, JAMES W.
FIELD, JOSEPH N.	SMITH, BYRON L.
FITZSIMONS, CHARLES	STOCKTON, JOSEPH
HALE, WILLIAM E.	WALKER, EDWIN
HARPER, WILLIAM R.	WALLER, R. A.
HATCH, AZEL F.	WALSH, JOHN R.
HEAD, FRANKLIN H.	WILLIAMS, NORMAN
JACKSON, HUNTINGTON W.	



## LIFE MEMBERS.

- |                             |                              |
|-----------------------------|------------------------------|
| ADAMS, GEORGE E.            | JOHNSON, FRANK S.            |
| ALDIS, OWEN F.              | JOHNSON, MRS. ELIZABETH AYER |
|                             | JONES, ARTHUR B.             |
| BARRETT, MRS. A. D.         |                              |
| BARRETT, ROBERT L.          | KEEP, CHAUNCEY               |
| BARTLETT, A. C.             | KING, FRANCIS                |
| BLACKSTONE, MRS. TIMOTHY B. | KING, JAMES C.               |
| BLAINE, MRS. EMMONS         | KIRK, WALTER RADCLIFFE       |
| BLAIR, CHAUNCEY J.          |                              |
| BLAIR, HENRY A.             | LAWSON, VICTOR F.            |
| BLAIR, WATSON F.            |                              |
| BOOTH, W. VERNON            | McCORMICK, MRS.              |
| BUTLER, EDWARD B.           | McCORMICK, CYRUS H.          |
| BYLLESBY, H. M.             | McCORMICK, HAROLD F.         |
|                             | MacVEAGH, FRANKLIN           |
| CARTON, L. A.               | MASON, WILLIAM S.            |
| CHALMERS, WILLIAM J.        | MITCHELL, J. J.              |
| CRANE, CHARLES RICHARD      |                              |
| CRANE, RICHARD T.           | NEWELL, A. B.                |
| CUMMINGS, D. MARK           |                              |
|                             | ORR, ROBERT M.               |
| DEERING, CHARLES            |                              |
| DELANO, FREDERIC A.         | PAM, MAX                     |
| DICK, ALBERT BLAKE          | PIKE, EUGENE S.              |
| DRAKE, TRACY C.             | PORTER, GEORGE F.            |
|                             | PORTER, H. H.                |
| FARWELL, WALTER             |                              |
| FAY, C. N.                  | REAM, MRS. CAROLINE P.       |
| FIELD, STANLEY              | REAM, NORMAN B.              |
| FULLER, WILLIAM A.          | REVELL, ALEX. H.             |
|                             | ROSENWALD, JULIUS            |
| GARTZ, A. F.                | RUSSELL, EDMUND A.           |
| GRISCOM, CLEMENT A.         | RYERSON, MRS. CARRIE H.      |
| GROMMES, JOHN B.            | RYERSON, MARTIN A.           |
|                             |                              |
| HAMILL, ERNEST A.           | SMITH, ORSON                 |
| HILL, LOUIS W.              | SPRAGUE, A. A.               |
| HOROWITZ, L. J.             | SPRAGUE, A. A., 2D.          |
| HOXIE, MRS. JOHN A.         | STURGES, GEORGE              |
| HUGHITT, MARVIN             |                              |
| HUTCHINSON, C. L.           | THORNE, GEORGE R.            |
|                             |                              |
| ISHAM, MRS. KATHERINE       | WILLARD, ALONZO J.           |
| PORTER.                     |                              |

## ANNUAL MEMBERS.

ADAMS, CYRUS H.  
ADAMS, MILWARD  
ALLERTON, ROBERT H.  
ARMOUR, GEORGE A.

BAILEY, EDWARD P.  
BECKER, A. G.  
BILLINGS, C. K. G.  
BILLINGS, DR. FRANK  
BOAL, CHARLES T.  
BROWN, WILLIAM L.  
BURLEY, CLARENCE A.

COMSTOCK, WILLIAM C.  
CONOVER, CHARLES H.  
COONLEY-WARD, MRS. L. A.  
CORWITH, CHARLES R.  
CUDAHY, JOHN  
CUMMINGS, E. A.  
CURTIS, D. H.

DAY, A. M.  
DEERING, JAMES  
DILLMAN, L. M.

EISENDRATH, W. N.

FAIR, R. M.  
FORGAN, JAMES B.  
FORSYTH, ROBERT  
FRANK, HENRY L.  
FULLER, O. F.  
FÜRST, CONRAD

GAYLORD, FREDERIC  
GLESSNER, J. J.  
GOODRICH, A. W.  
GORDON, EDWARD K.  
GREY, CHARLES F.  
GREY, WILLIAM L.  
GURLEY, W. W.

HARRIS, GEORGE B.  
HARRIS, JOHN F.  
HASKELL, FREDERICK T.  
HIBBARD, WILLIAM G., JR.  
HITCHCOCK, R. M.  
HOLT, GEORGE H.  
HOPKINS, JOHN P.

INSULL, SAMUEL

JENKINS, GEORGE H.  
JONES, J. S.

KEEFER, LOUIS  
KEITH, W. SCOTT  
KIMBALL, EUGENE S.  
KIMBALL, MRS. MARK

LAMB, FRANK H.  
LAY, A. TRACY  
LEE, BLEWETT  
LEIGH, EDWARD B.  
LINCOLN, ROBERT T.  
LINN, W. R.  
LOGAN, F. G.  
LORD, J. B.  
LOWDEN, FRANK O.  
LYTTON, HENRY C.

McCREA, W. S.  
McWILLIAMS, LAFAYETTE  
MacFARLAND, HENRY J.  
MAGEE, HENRY W.  
MANSON, WILLIAM  
MANSURE, E. L.  
MAYER, LEVY  
MERRYWEATHER, GEORGE  
MEYER, MRS. M. A.  
MILLER, CHARLES P.  
MOORE, L. T.  
MOORE, N. G.  
MULLIKEN, A. H.

NATHAN, ADOLPH  
NOLAN, JOHN H.  
NORTON, O. W.

OEHNE, THEODORE  
ORB, JOHN A.  
OSBORN, HENRY A.

PALMER, PERCIVAL B.  
PARKER, FRANCIS W.  
PEARSON, EUGENE H.  
PINKERTON, W. A.  
PORTER, WASHINGTON

RIPLEY, E. P.  
ROSENBAUM, JOSEPH  
ROSENFELD, MRS. MAURICE  
RUNNELLS, J. S.

SCHMIDT, DR. O. L.  
SCHWARTZ, G. A.  
SEIPP, MRS. C.  
SHEDD, JOHN G.

SHORTALL, JOHN L.  
SKINNER, THE MISSES  
SOPER, JAMES P.  
SOUTHWELL, H. E.  
SPENCE, MRS. ELIZABETH E.  
SPOOR, J. A.  
STOCKTON, JOHN T.  
STUART, ROBERT

TEMPLETON, THOMAS

UIHLEIN, EDWARD G.

WACKER, CHARLES H.  
WALKER, JAMES R.  
WALKER, WILLIAM B.  
WALLER, EDWARD C.  
WEBSTER, GEORGE H.  
WHITE, A. STAMFORD  
WHITEHEAD, W. M.  
WILSON, MRS. E. C.  
WILSON, M. H.  
WOODCOCK, LINDSAY T.

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DECEASED.

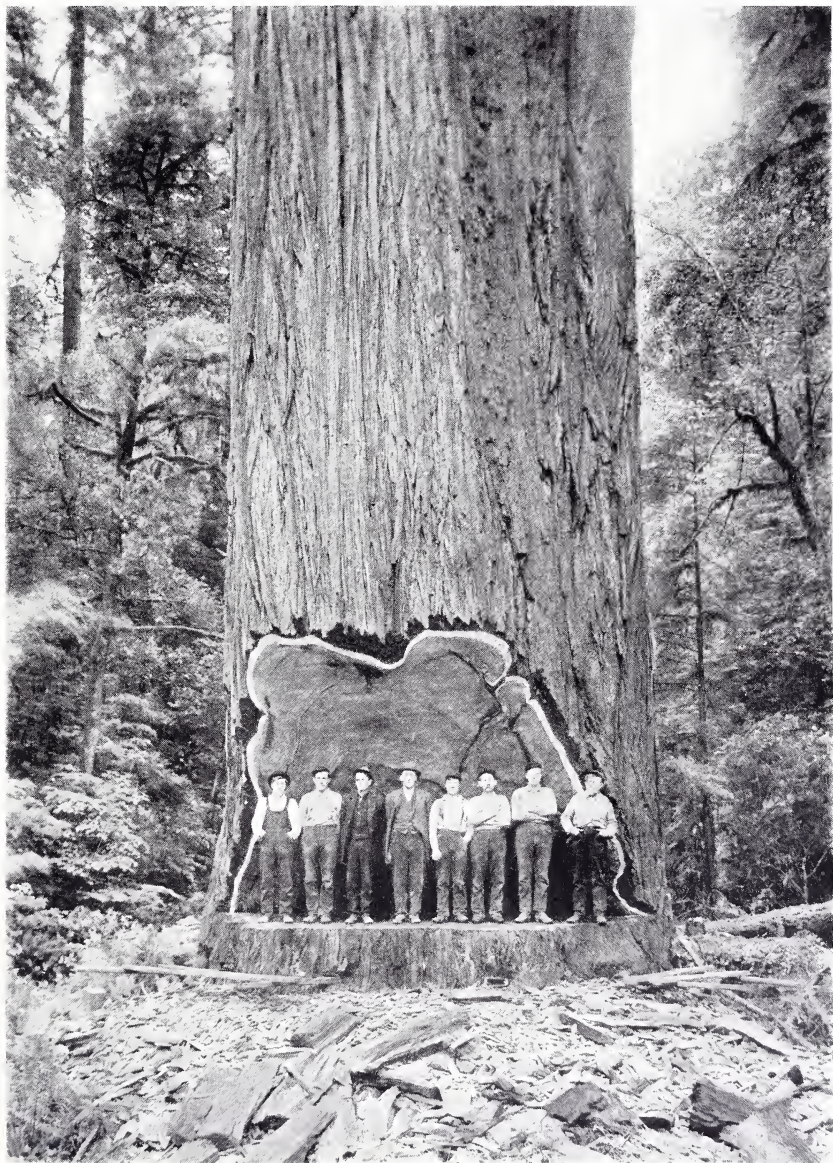
BIRKHOFF, GEORGE, JR.







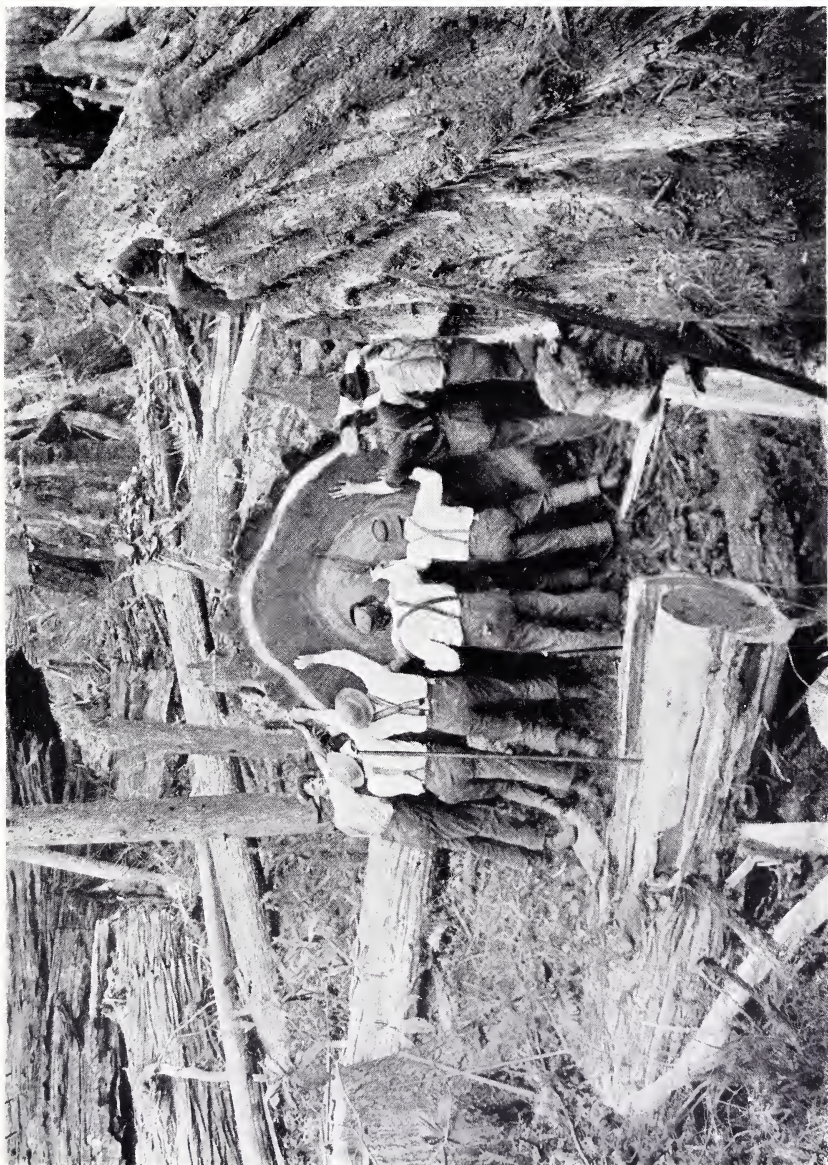




GETTING DOWN THE CALIFORNIA REDWOOD TRUNK SPECIMEN FOR THE MUSEUM  
COLLECTION REPRESENTING NORTH AMERICAN FORESTRY.







GETTING THE "WHEEL SPECIMEN", OF CALIFORNIA REDWOOD OUT OF THE FOREST FOR THE MUSEUM COLLECTION REPRESENTING NORTH AMERICAN FORESTRY.





PART OF THE CRATED SPECIMEN OF CALIFORNIA REDWOOD SHOWING THE SIZE OF THE  
BOARDS SECURED FOR THE MUSEUM COLLECTIONS REPRESENTING  
NORTH AMERICAN FORESTRY.













THE LATE NORMAN B. REAM  
An Incorporator and Trustee of the Museum.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 186.

REPORT SERIES.

VOL. V, No. 1.

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ANNUAL REPORT OF THE  
DIRECTOR

TO THE  
BOARD OF TRUSTEES

FOR THE YEAR 1915.



CHICAGO, U. S. A.

January, 1916.





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## THE BOARD OF TRUSTEES.

GEORGE E. ADAMS.	ARTHUR B. JONES.
EDWARD E. AYER.	GEORGE MANIERRE.
WATSON F. BLAIR.	CYRUS H. MCCORMICK.
WILLIAM J. CHALMERS.	GEORGE F. PORTER.
MARSHALL FIELD III.	MARTIN A. RYERSON.
STANLEY FIELD.	FREDERICK J. V. SKIFF.
HARLOW N. HIGINBOTHAM.	A. A. SPRAGUE, 2nd.
	CHAUNCEY KEEP.

## HONORARY TRUSTEE.

OWEN F. ALDIS.

---

## DECEASED.

GEORGE R. DAVIS.	NORMAN B. REAM.
MARSHALL FIELD, JR.	EDWIN WALKER.
HUNTINGTON W. JACKSON.	NORMAN WILLIAMS.

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EDMOND N. GUERET, *Assistant Curator Division of Osteology.*

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### ASSISTANT RECORDER.

BENJ. BRIDGE

### THE LIBRARY.

ELSIE LIPPINCOTT, *Librarian.*

EMILY M. WILCOXSON, *Assistant Librarian*

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### THE N. W. HARRIS PUBLIC SCHOOL EXTENSION.

S. C. SIMMS, *Curator.*

# ANNUAL REPORT OF THE DIRECTOR.

1915

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To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1915.

Pursuing the announced policy of the Museum, its efforts during the year have continued to concentrate upon the preparation for exhibition in the new Museum building of such material as had been previously acquired. This material is of a character that when properly installed will fit into the general exhibition scheme which has been based fully as much upon material in storage as material in cases. Therefore the progress that has marked the period of this report has been largely due to the labors of the preparators, the taxidermists and the skilled workmen, and no particular effort has been made to acquire new material either by expedition or purchase. Later it is expected that some elimination of early work and imperfect material will take place.

The contract between the South Park Commissioners and the Museum corporation, granting a site for the new building near and south of Twelfth street extended in an easterly direction, was consummated on January 27th. The work upon the new Museum building, actually commenced on July 26th, has progressed with such vigor that the date on which the edifice will be ready for occupation has been considerably advanced. The impetus given to the building operations has had its influence during the past four months upon the scientific staff, and plans for installation, the system of transfer, the arrangements of the halls, offices, laboratories, work rooms, shops, etc., have received much attention on the part of the curators and their assistants. It is not considered necessary, if pertinent, to discuss the progress of the new building in these reports, in as much as the entire work and its responsibilities rests upon and within the Building Committee, but, as items of history in the development of the Museum as a whole, simple record of the work is considered permissible. The Board of Trustees has granted the request of the Chicago Geographic Society for permanent quarters in the new Museum building.

The report of the expert from Graham, Burnham & Company, who examined the present Museum building, indicates that the physical



condition of the structure is safe and stable. A thorough examination of the present building was also made by expert inspectors to examine the fire conditions and the protection and equipment for the prevention and extinguishing of fires, who report that a high degree of precaution is exercised insofar as fire hazard in the building was concerned and that the protection was good and well maintained. Three minor defects in the system were noted and the recommendations to remedy these have been carried out.

A committee of citizens interested in the establishment of an aquarium addressed the Board of Trustees to ascertain to what extent the authorities of the Museum would support the movement and contribute scientific assistance or control of its management. The response of the Board was not only in favor of establishing the aquarium, especially if a location could be obtained in proximity to the new Museum building, but the Trustees declared their willingness and their desire to accept the scientific management of the proposed aquarium.

A review of the acquisitions of the Museum by gift and purchase during the past year will demonstrate the increasing wealth of the Institution. Among the gifts may be mentioned many from the exhibiting countries and individuals at the Panama-Pacific International Exposition. The Museum acquired by purchase some striking and attractive material from the Chinese Government, which had been on exhibition at San Francisco. Other interesting material not costly but unusual and desirable was also purchased. Special mention should be made of the gift of Mr. Fritz von Frantzius, consisting of two Imperial Chinese Jade books and a collection of Japanese coins.

The resignation of Dr. George A. Dorsey, Curator of the Department of Anthropology, after twenty years service with the Institution, created a vacancy which was filled by the appointment of Dr. Berthold Laufer as Curator of the Department. Dr. Laufer was formerly the Associate Curator of Asiatic Ethnology and, during the year Dr. Dorsey was absent in the Orient, assumed the duties of Acting Curator. His extensive and varied experience in scientific research and investigation has specially qualified Dr. Laufer for the position to which he has been appointed. He has conducted expeditions into eastern Siberia for exploration of the ethnology of native tribes and to Tibet and China for culture-historical investigations and ethnological collections; was assistant curator of ethnology at the American Museum of Natural History; lecturer in anthropology and East-Asiatic languages at Columbia University, and is the author of many important books and papers relating to the ethnology, archaeology and philology of the East.

With funds contributed by Mr. Norman W. Harris an attractive and

instructive exhibit of the Harris Public School Extension cases was made at the Panama-Pacific International Exposition. The exhibit excited considerable interest and much favorable comment on the part of visitors at the Exposition and was the means of inaugurating serious consideration of the adoption of this system of education both in foreign countries and in other cities of the United States. The Japanese government asked for type cases for the information of the Imperial Department of Education. The exhibit was awarded a grand prize by the International Jury.

During the year Mr. Chauncey Keep became a Corporate Member of the Museum and was also elected a member of the Board of Trustees to fill a vacancy in the Board.

The following elections of honorary positions in connection with the Institution have been made during the past year. Mr. Fritz von Frantzius and Mr. Henry J. Patten were elected Life Members. Chiefly in recognition for their support and services in affairs of the site for the new building, Mr. Charles L. Hutchinson, Mr. Edward B. Butler, and Mr. Charles H. Markham were elected Patrons of the Museum. Mr. Albert M. Collins of Philadelphia and Mr. Lee Garnett Day of New York were elected Patrons of the Museum in view of the eminent services they have rendered to the Institution.

Mr. Norman B. Ream, who has been a member of the Board of Trustees from its organization, but who during recent years has resided in New York, died on February 9, 1915. The death of Dr. Daniel Giraud Elliot, which occurred on December 22nd, a prominent man in science, who resigned from the staff of the Museum after twelve years of service as Curator of the Department of Zoology, has to be recorded. Prof. Frederick Ward Putnam, formerly professor of American archaeology and ethnology at Harvard University and curator of the Peabody Museum, and a Patron of Field Museum of Natural History since January 31, 1898, died at Cambridge on August 14th. Mr. Robert F. Cummings, an Honorary Member of the Museum, who provided liberal funds for expeditions, for surveys and collections in the Philippine Islands and whose generosity has permitted the Museum to bring together a very extensive and attractive Philippine ethnology exhibit, died on December 31, 1914.

**MAINTENANCE.** — The budget approved by the Board of Trustees provided the sum of \$144,050 for the maintenance of the Museum for the fiscal year. The actual amount expended was \$124,185, leaving a balance within the anticipated expense for the year of approximately \$19,000. In addition to the cost of maintenance sums were expended for collections, new installation and expeditions that brought the total

to \$181,000. As will be observed from the details of the financial statement the sum of \$7,075, representing individual contributions, has also been disbursed for special collections and expeditions.

PUBLICATIONS.—Six publications were issued during the year, comprising parts of five volumes, details of which follow:

- Pub. 180.—Anthropological Series. Vol. XIV, No. 1. Traditions of the Tinguian. A Study in Philippine Folk-lore. By Fay-Cooper Cole. 126 pages. Edition 1500.
- Pub. 181.—Report Series, Vol. IV, No. 5. Annual Report of the Director to the Board of Trustees for the year 1914. 78 pages. 16 half-tones. Edition 2500.
- Pub. 182.—Ornithological Series, Vol. I, No. 8. Descriptions of New Birds from South America and Adjacent Islands. By Charles B. Cory. 10 pages. Edition 1500.
- Pub. 183.—Ornithological Series, Vol. I, No. 9. Notes on South American Birds, with Descriptions of New Subspecies. By Charles B. Cory. 33 pages. Edition 1500.
- Pub. 184.—Anthropological Series, Vol. XV, No. 1. The Diamond. A Study in Chinese and Hellenistic Folk-lore. By Berthold Laufer. 75 pages. Edition 1500.
- Pub. 185.—Zoölogical Series, Vol. X, No. 13. New Mammals from Brazil and Peru. By Wilfred H. Osgood. 12 pages. Edition 1500.

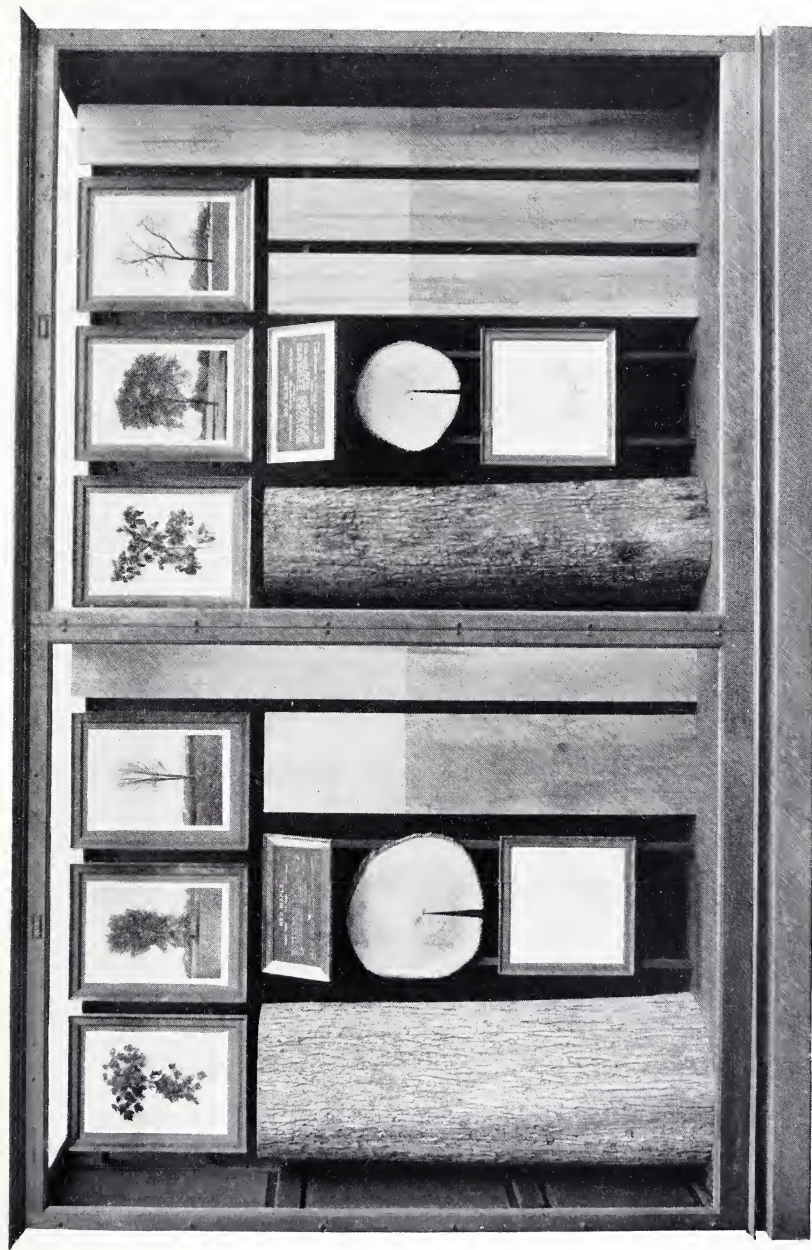
#### NAMES ON MAILING LIST

Domestic . . . . .	523
Foreign . . . . .	672
	<hr/>
	1,195

#### DISTRIBUTION OF FOREIGN EXCHANGES

Africa . . . . .	20	Holland . . . . .	20
Australia . . . . .	37	India . . . . .	18
Austria . . . . .	32	Italy . . . . .	36
Belgium . . . . .	18	Japan . . . . .	10
Borneo . . . . .	1	Java . . . . .	4
Bulgaria . . . . .	1	Mexico . . . . .	19
Canada . . . . .	27	Norway . . . . .	8
Central America . . . . .	7	Portugal . . . . .	5
China . . . . .	1	Russia . . . . .	16
Denmark . . . . .	8	South America . . . . .	29
France . . . . .	54	Spain . . . . .	7
Germany . . . . .	134	Sweden . . . . .	14
Great Britain . . . . .	117	Switzerland . . . . .	23
Greece . . . . .	1	West Indies . . . . .	45





TYPE CASE—NORTH AMERICAN FORESTRY.

Each half case, or unit, is a complete monographic assemblage of elements combining to represent all characters of the tree and its lumber. The trunk specimens are in ratio size.





## DISTRIBUTION OF DOMESTIC EXCHANGES

Alabama . . . . .	2	New Hampshire . . . . .	4
Arkansas . . . . .	1	New Jersey . . . . .	11
California . . . . .	24	New Mexico . . . . .	3
Colorado . . . . .	10	New York . . . . .	68
Connecticut . . . . .	18	North Carolina . . . . .	6
Delaware . . . . .	2	North Dakota . . . . .	2
District of Columbia . . . . .	39	Ohio . . . . .	19
Florida . . . . .	4	Oklahoma . . . . .	3
Idaho . . . . .	1	Oregon . . . . .	1
Illinois . . . . .	56	Pennsylvania . . . . .	33
Indiana . . . . .	15	Rhode Island . . . . .	4
Iowa . . . . .	15	South Carolina . . . . .	2
Kansas . . . . .	6	South Dakota . . . . .	2
Kentucky . . . . .	3	Tennessee . . . . .	2
Louisiana . . . . .	4	Texas . . . . .	3
Maine . . . . .	7	Utah . . . . .	1
Maryland . . . . .	8	Vermont . . . . .	3
Massachusetts . . . . .	54	Virginia . . . . .	4
Michigan . . . . .	11	Washington . . . . .	6
Minnesota . . . . .	8	West Virginia . . . . .	5
Mississippi . . . . .	2	Wisconsin . . . . .	17
Missouri . . . . .	12	Wyoming . . . . .	2
Montana . . . . .	2	Cuba . . . . .	3
Nebraska . . . . .	6	Hawaii . . . . .	4
Nevada . . . . .	2	Philippine Islands . . . . .	3
		Porto Rico . . . . .	1

THE LIBRARY.—The books and pamphlets accessioned during the year were 3,400, bringing the total number of books and pamphlets in the library to 68,275, which are distributed as follows:

General Library . . . . .	44,221
Department of Anthropology . . . . .	3,293
Department of Botany . . . . .	6,946
Department of Geology . . . . .	9,579
Department of Zoology . . . . .	4,236

Notwithstanding the small number of serial publications received from foreign exchanging institutions, there is a slight increase over the books and pamphlets received during the previous year. Among the gifts of the year is the sumptuous edition of Japanese Temples and Treasures in three illustrated volumes presented by His Imperial Majesty's Commissioner General to the Panama-Pacific International Exposition. The edition is limited to two hundred copies and was especially prepared for the Exposition. Through the Minister of International Affairs, Wellington, New Zealand, a copy of the Illustrated Flora of New Zealand

was received. An almost complete set of its Transactions was presented by the South Australia Royal Society, Adelaide. The Société des Sciences Naturales, La Rochelle, France, presented a complete set to date of its *Annales* and the Archæological Survey of India eleven of its early Reports to assist in completing the Museum file. Other gifts that have been received are listed elsewhere. The late Dr. Seth E. Meek's ichthyological library, consisting largely of monographic papers and pamphlets, was purchased and from it 2,000 new titles were secured. These have been catalogued and bound. Other important acquisitions by purchase were: The Oxford English Dictionary; Audebert, *Histoire Naturelle des Singes et Makis*, 1800; Berthelot et Ruelle, *Collection des Anciens Alchimistes Grecs*; Hobson, *Chinese Pottery and Porcelain*; sets to date of the *Journal of Indian Art* *Ornithologische Monatsberichte* and *The Zoologische Annalen*.

The number of periodicals received was ninety-nine with twenty-two in subscription sets which have been previously entered. There were bound during the year 564 books, pamphlets and serial publications, and 19,275 cards were written and added to the catalogues. Twelve installments of the John Crerar Library cards have been received and added to its catalogue.

There was an increasing number of students and other visitors who found the library of service in seeking volumes not obtainable in other libraries in the city. A rearrangement of the book cases in the reading room was made during the year that rendered the books more accessible and improved its general appearance.

DEPARTMENTAL CATALOGUING, INVENTORING, AND LABELING. — The work of cataloguing in the Department of Anthropology during the year is quite notable, 10,062 cards having been written. The cards are distributed over the divisions as follows: 975 North American, chiefly Hopi ethnology; 3,071 Melanesian ethnology; 5,027 New Guinea, collections by Umlauff, Voogdt and Dorsey; 932 Asiatic ethnology; and 57 classical archæology. These cards have been entered in the inventory books of the Department, which now number 38, and the total number of cards recorded beginning from the first volume is 139,516. During the year the Department was supplied with 2,664 printed labels, which have been distributed as follows: 720 Physical Anthropology; 1,250 Mrs. T. B. Blackstone Collection; 52 Models of Chinese Boats; 373 Joseph N. Field Collection; 12 Edward E. Ayer Philippine Guns; 249 Classical Archæology; and 8 objects in the Gem Room. From the section of Photography the Department has received 1,310 prints, which have been duly classified and added to the departmental albums, each print having received a typewritten description. Three albums re-

lating to New Guinea were prepared. A catalogue of lantern-slides was inaugurated by the Department, for which 1,537 cards have been written. The slides have been arranged in the succession of the numbers and placed in cardboard boxes with a label pasted in front, showing the range of the numbers, subject, and locality of the slides. By consulting the card-catalogue it is possible to locate any slide or to ascertain what slides relate to a particular subject, region, or tribe. To meet the demand of the public for information on specimens in the collections and as copies of many labels have been solicited by students, a permanent record of all labels written for the Department has been established. When printing labels intended for installation, copies are made, which are mounted on cardboard, and classified according to the cases in which the specimens are installed. These cards, 620 of which have thus far been prepared, are filed in proper order in cabinets showing identification labels on the outside. A card-catalogue of the exhibition cases, which have all been provided with numbers, has also been inaugurated.

All material received by the Department of Botany during the year has been fully catalogued and distributed, either into installation or classified and placed ready for installation. There were catalogued 19,831 sheets of specimens and 20,305 entries have been made, making the total number of entries 432,791.

Cataloguing of all specimens in the Department of Geology is complete, specimens received during the year being catalogued as received. Of the specimens catalogued 2,860 were palæontological specimens; 286 economic specimens; 102 mineralogical specimens and 118 miscellaneous, making a total of 3,366. Labels prepared numbered 660, of which 309 were printed and distributed. Among the collections which were labeled entire were those of the folklore of gems, Pleistocene fossils, coal tar products, and others of the economic series. Among these were several large, descriptive labels. To the Departmental photograph albums 63 prints have been added, making a total of 2,748 prints now in these albums.

In the Department of Zoology 1,793 entries in the primary catalogue for birds and mammals have been made. The systematic card catalogues have received more than usual revision and additions. The collection of mammals in alcohol, principally bats, has been provided with 617 new labels. 1,524 labels for shells have also been written, of which 1,253 were installed.

The following table shows the work performed on catalogues and the inventorying accomplished:

	No. of Record Books	Total No of entries to Dec. 31, 1915	Entries During 1915	Total No. of Cards Written
Department of Anthropology . . .	38	141,302	10,062	139,516
Department of Botany . . . .	57	432,791	20,305	65,750
Department of Geology . . . .	21	132,711	3,366	7,705
Department of Zoology . . . .	40	96,830	1,793	33,565
The Library . . . . .	14	100,290	3,400	204,967
Section of Photography . . . .	17	113,303	24,76	.....

ACCESSIONS. — The number of accessions in the Department of Anthropology amounted to 31 during the year, of which 27 have been entered. The majority of these were received through the generosity of friends of the Institution. Mr. Edward E. Ayer presented several gifts of scientific importance. These include four brass guns (so-called *lantaka*) captured from the Moro on the Philippine Islands and presumably cast by Chinese in the eighteenth century; a collection of 161 chipped stone (mostly obsidian) projectile points from Upper Lake, Lake County, California, comprising a large variety of types; 19 miniature Pomo baskets from California, of striking technique and variety of form and weave; and an interesting collection of beads and perforated shells discovered in a grave with two skeletons, excavated at Leadbetter Landing, Benton County, Tennessee. A group of 20 tear bottles from Egypt, found in Venice by Mr. Ayer during his travels, was purchased by the Museum. A Roman lamp, unearthed in Transylvania, Hungary, was received as a gift from Mr. William J. Chalmers. The East-Asiatic collections have been enriched by several important gifts. Prominent among these are a complete jade book and a jade seal, both being treasures from imperial possession, presented by Mr. Fritz von Frantzius. The jade book is unique inasmuch as it is complete with the original binding in yellow silk brocade and in perfect condition. It consists of ten rectangular slabs carved from exquisite Khotan nephrite (thirty pounds in weight), and is inscribed with a composition in Chinese and Manchu of the famous Emperor K'ang-hi in 1688; when he canonized his grandmother, the Empress Wen, and conferred upon her a posthumous title. The seal,  $6\frac{3}{4}$  pounds in weight, a masterpiece of carving, as recorded by the inscription, was bestowed upon the Empress Jui on February 12, 1796, the day when she was officially appointed Empress of China. A description of these memorable objects has been published in the June number of the *Fine Arts Journal*. Mr. von Frantzius has likewise donated a very instructive collection of Japanese coins and paper money, numbering about 800 specimens, brought together by order of the Japanese Government, and a fine Chinese gold ring decorated with designs in relief. To Dr. Frank W. Gunsaulus the Museum is in-



debted for a very remarkable Chinese rosary of a hundred beads carved from exquisite dark-red Burmese amber, and in all probability manufactured in the imperial atelier. An interesting collection of Pompeiian antiquities was purchased by the Museum. It represents a valuable addition to the Pompeiian material and very well illustrates the agricultural phase and every-day life of the people in southern Italy toward the end of the first century. A Persian chain mail, acquired in Tiflis, was secured by purchase. The most important purchase of the year is represented by the models of Chinese pagodas and the wood-carved gateway made by the Orphan School of the celebrated Jesuit institution in Sikkawai near Shanghai and secured at the Panama-Pacific Exposition of San Francisco. The purchase of a small collection of incised pottery dug from shell-heaps in Walton County, Florida, is a welcome addition to the small quantity of material possessed by the Museum from this region. With funds provided by Mr. Homer E. Sargent, Mr. Cyrus H. McCormick and Mr. Martin A. Ryerson, a collection consisting of approximately one thousand objects, illustrating textiles, costume, jewelry, brass and bidri ware, religious images, and ivory carving, was secured by Dr. George A. Dorsey in India. This collection also includes an interesting series of miniature painting and notable old wood-carvings originating from a Jaina temple. Altogether it denotes a hopeful beginning in the direction of a collection representative of the high civilization of India and augurs well for the large opportunities offered in this immense field in which work on extensive lines may well be continued.

There were added to the Department of Botany during the year 19,831 sheets of herbarium specimens, comprising in part the following interesting and valuable series: Baker & Huber, Brazil 60; Botanical Garden, Natal 101; Botanical Garden, Sidney 99; Buchtien, Bolivia 200; Clokey, Illinois 145; Cowles, British Columbia 164; Alaska 468; Alberta 81, Saskatchewan 72, and Washington 491; Dusener, Illinois 292, Indiana 320; Elmer, Philippine Islands 865; Fendler, New Mexico 167; Gates, Philippine Islands 397; Gaumer, Yucatan 212; Heller, California 1044; Holm, Porto Rico 149; Johnson, Wisconsin 118; Lansing, Illinois 47, Indiana 128; Lindheimer, Texas 66; Meyer, Asia 47; Moodie, Alberta 195; Millspaugh, Wisconsin 84; Palmer, Mexico 381; Payson, Colorado 260; Philippine Bureau of Sciences 1367; Purpus, Mexico 227; Reynolds, Illinois 65, Wyoming 155, Yellowstone Park 75, Washington 151; Sherff, Illinois 214, Photographs of *Bidens* and *Cosmos* 671; Huron H. Smith, Oregon 53; Standley, New Mexico 176; U. S. Department of Agriculture, Gramineae 201; Wenzel, Philippine Islands 841; and Wright, New Mexico 182. In addition to the above, the organiza-



tion of the private herbaria purchased by the Museum was completed, and the specimens incorporated in the general herbarium. Of the 13,166 sheets so incorporated the following are notable: Baker, Colorado 534; Camp, Michigan and Ohio 549; Eggleston, Vermont 497; Fitzpatrick, Iowa 443; Graut, Vermont 388; Heller, California 998; Idaho 447; Pennsylvania 496; Sandwich Islands 938; Kearney, New Jersey and Tennessee 375; McDonald, Illinois 405; Mackenzie, Kansas and Missouri 308; Morris, Connecticut to Virginia 464; Nelson, Wyoming 442; Piper, Washington 268; Sandberg, Minnesota 248; Sheldon, Minnesota 204; Small, Virginia 224; Umbach, Illinois and Indiana 533; and Watson, Ohio 152. The private herbaria now incorporated with that of the Museum are the following:

Bebb, M. S., <i>Salix</i> and general . . . . .	31,583
Heller, A. A., General . . . . .	13,166
Hitchcock, A. S., Floridian . . . . .	7,188
Millspaugh, C. F., <i>Euphorbia</i> and general . . . . .	5,006
Patterson, H. N., General . . . . .	37,887
Rothrock, J. T., General . . . . .	22,901
Small, J. K., South U. S. and general . . . . .	19,381
Schott, A., Yucatan and general . . . . .	8,447
Schuetz, J. H., Wisconsin and general . . . . .	10,990
University of Chicago, General . . . . .	44,104
Wahlstedt, J. H., <i>Epilobium</i> , <i>Viola</i> , <i>Chara</i> and general . . . . .	17,555

The additions to the organized herbarium during the year, geographically arranged, are as follows: (The tabulation does not include regions from which no additions have been received this year).

LOCALITY	Added to Herbarium 1915	Total now in Herbarium
ALASKA . . . . .	473	1,162
CANADA:		
Alberta . . . . .	277	828
British Columbia . . . . .	165	1,182
Manitoba . . . . .	1	259
New Brunswick . . . . .	4	181
Saskatchewan . . . . .	73	439
UNITED STATES:		
Alabama . . . . .	127	1,464
Arizona . . . . .	74	9,522
California . . . . .	1,151	35,091
Carolina, North . . . . .	213	4,787
Carolina, South . . . . .	7	1,042
Colorado . . . . .	346	12,133
Connecticut . . . . .	24	579
Dakota, North . . . . .	4	564
Dakota, South . . . . .	83	1,176



IMPERIAL CHINESE JADE SEAL CONFERRED UPON THE EMPRESS JUI ON FEBRUARY 12, 1796.  
Gift of Fritz von Frantzius.



LOCALITY	Added to Herbarium 1915	Total now in Herbarium
UNITED STATES:		
Delaware . . . . .	1	1,594
District of Columbia . . . . .	150	2,523
Florida . . . . .	19	20,735
Florida Keys, General . . . . .	1	682
Big Pine Key . . . . .	1	3
Coon Key . . . . .	1	1
Georgia . . . . .	4	4,566
Idaho . . . . .	219	3,479
Illinois . . . . .	1,109	22,161
Indiana . . . . .	760	6,668
Indian Territory . . . . .	25	312
Iowa . . . . .	39	1,801
Kansas . . . . .	45	551
Kentucky . . . . .	4	972
Louisiana . . . . .	53	1,349
Maryland . . . . .	118	1,225
Massachusetts . . . . .	220	3,404
Michigan . . . . .	173	4,176
Minnesota . . . . .	812	2,411
Mississippi . . . . .	1	2,079
Missouri . . . . .	360	3,380
Montana . . . . .	22	4,030
Nebraska . . . . .	6	420
Nevada . . . . .	17	1,273
New Hampshire . . . . .	56	1,542
New Jersey . . . . .	56	3,011
New Mexico . . . . .	630	3,591
New York . . . . .	296	6,353
Ohio . . . . .	250	2,080
Oklahoma . . . . .	3	294
Oregon . . . . .	69	7,503
Pennsylvania . . . . .	653	11,514
Rocky Mountains (General) . . . . .	4	1,399
Tennessee . . . . .	105	1,562
Texas . . . . .	93	9,857
Utah . . . . .	3	2,535
Vermont . . . . .	1,014	3,689
Virginia . . . . .	594	5,297
Washington . . . . .	314	7,756
San Juan Island . . . . .	151	151
Brown Island . . . . .	1	11
West Virginia . . . . .	7	2,010
Wisconsin . . . . .	237	4,900
Wyoming . . . . .	622	1,552
Yellowstone Park . . . . .	75	528
CENTRAL AMERICA:		
Costa Rica . . . . .	5	616
Guatemala . . . . .	5	2,891

LOCALITY	Added to Herbarium 1915	Total now in Herbarium
<b>CENTRAL AMERICA:</b>		
Mexico . . . . .	864	36,602
Lower California . . . . .	18	1,682
Yucatan . . . . .	212	4,903
<b>PANAMA:</b>		
Canal Zone . . . . .	12	65
Taboga Island . . . . .	1	1
San Salvador . . . . .	1	25
<b>WEST INDIES:</b>		
Bahamas:		
New Providence . . . . .	1	2,423
Barbados . . . . .	3	340
Cuba . . . . .	5	9,783
Isle of Pines . . . . .	2	655
Guadeloupe . . . . .	1	1,035
Hayti . . . . .	4	309
Jamaica . . . . .	12	7,400
Martinique . . . . .	1	617
Porto Rico . . . . .	167	4,753
San Jan, Little . . . . .	1	8
Santo Domingo . . . . .	2	1,381
Santa Lucia . . . . .	1	2
Sombrero Island . . . . .	1	1
<b>SOUTH AMERICA:</b>		
Bolivia . . . . .	201	3,917
Brazil . . . . .	60	573
Tobago . . . . .	2	572
Trinidad . . . . .	7	489
Venezuela . . . . .	3	1,067
<b>EUROPE:</b>		
Austro-Hungary . . . . .	316	7,383
England . . . . .	1	682
<b>ASIA:</b>		
Borneo . . . . .	2	10
China . . . . .	46	370
Philippine Islands . . . . .	3,467	9,909
Siberia . . . . .	1	431
<b>AFRICA:</b>		
South Africa . . . . .	34	1,293
Basutoland . . . . .	3	3
Natal . . . . .	44	794
Zululand . . . . .	15	175
<b>OCEANIA:</b>		
AUSTRALIA:		
New South Wales . . . . .	85	611
Queensland . . . . .	6	24
West Australia . . . . .	7	141
Guam . . . . .	1	2
Fiji Islands . . . . .	1	2

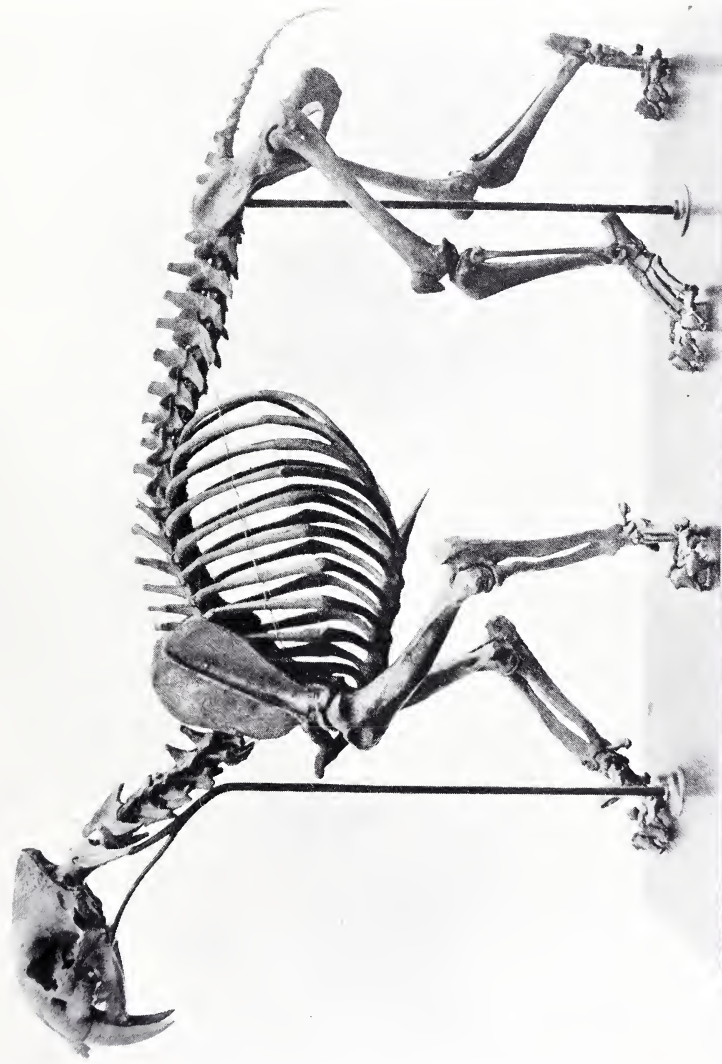


LOCALITY	Added to Herbarium 1915	Total now in Herbarium
OCEANIA:		
Samoa . . . . .	1	63
Sandwich Islands, general . . . . .	..	484
Maui . . . . .	1	1
Kauai . . . . .	449	449
Oahu . . . . .	541	541
Horticultural . . . . .	21	2,671
Illustrations mounted as Herbarium sheets . . . . .	678	1,923

The most important accession in the Department of Geology was the gift of a large quantity of specimens of the fossil skeletons found in the asphalt beds of Los Angeles, California. This large collection was presented through the kindness of Mr. Edward E. Ayer, Mr. E. B. Butler, Mr. W. R. Linn, and Mr. Martin A. Ryerson. Among the important features of the collection was a complete mounted skeleton of the sabre-tooth tiger. This forms a striking and valuable addition to the series of fossils. An additional skeleton of this tiger, incomplete but mountable, was also included in the collection. An incomplete but mountable skeleton of the fossil wolf of the Los Angeles locality and in addition six good skulls and twelve lower jaws of the animal were also received. The large, extinct sloth found at this locality was represented by a skull nearly two feet in length, also by teeth and parts of lower jaws and some of the peculiar leg bones and claws of the animal. These will furnish a mounted limb. A large fossil lion of the locality, about twice as large as the largest African lion, is represented by several bones; a large camel, one-half larger than the largest modern camel, is represented by vertebrae and some other bones; and the native horse is represented by leg bones and teeth. There are also contained in the collection parts of four bird skulls, leg bones and claws, and probably one mountable foot. Some of these bones show birds of unusually large size. Bones of the mammoth and bison, the latter including one good bison skull, were also comprised in the collection. In addition a large quantity of miscellaneous bones of various species was included which will be valuable for purposes of comparison and possibly for completing skeletons. Two meteoric stones of the fall which occurred at Blanket, Texas, May 30, 1909, were presented through the kindness of Mr. Stanley Field and Mr. Arthur B. Jones. These stones represent all the known material of this fall and make a valuable addition to the meteorite collection. About 60 specimens of minerals and ores were presented by Mr. W. J. Chalmers. This series included a number of specimens of gold ores showing free gold, specimens of native silver, agate, turquoise and other valuable minerals. Fifteen specimens of jasper and moss agate, presented by Mr. J. H. Mosher of



Glendive, Montana, and several additional specimens of moss agate showing remarkable imitative landscape effects, loaned by him, furnish excellent specimens of a remarkable occurrence of this mineral. Mr. Fred Pattee contributed a number of specimens of ores and industrial minerals from various western localities. These gifts included ores of copper and vanadium, also specimens of phosphates, asbestos and barite. An interesting series of copper ores showing stages of replacement of hornblende by copper minerals was presented by Dr. F. C. Nicholas, also a valuable specimen of tungsten ore. A striking and valuable specimen of gold ore from the Smuggler-Union mine, Colorado, was presented by Mr. T. S. Chalmers. The India Geological Survey presented several specimens of Indian laterite, thus securing a representation of this peculiar mineral which had not hitherto been possessed. The representation of the Los Angeles fossil fauna was increased by the gift of 532 specimens by Dr. William Bebb. These specimens included several hundred bones of *Smilodon*, a large number of bones of the fossil wolf and some of the fossil horse, sloth and bison. The Colorado-Yule Marble Company presented six full-sized slabs showing the varieties of marble obtained at its quarries. The collection of fuller's earths and barites which had hitherto been quite incomplete, was increased by the gift of specimens from several firms producing these substances. Of these, fuller's earths were presented by the Manatee Fuller's Earth Corporation, the Floridin Company, J. E. and R. M. Farnsworth and the Lester Clay Company; and barite was presented by the Cherokee Chemical Company, Durex Chemical Works, Krebs Pigment and Chemical Company, and Thompson, Weinman and Company. Mr. H. R. Wood, the producer, presented four specimens of tungsten ore from Arizona, and C. K. Williams and Company three specimens of crude and ground talc. Nine specimens of iron ore from the unusual deposits that occur at Mayville, Wisconsin, were presented by Mr. E. S. O'Connor. Mr. Max Ziege presented 33 specimens of ores from the Ruby Mountain District, Nevada, which included copper, antimony and silver ores and accompanying rocks. Exchanges made with several individuals and institutions resulted in adding desirable material. The most important accession received in this way was obtained from the Deseret Museum, Salt Lake City, Utah, and consisted of fifteen specimens of the products of the Great Salt Lake, Utah, and fifteen brilliant and rare specimens of crystallized pyrite and tetrahedrite from Bingham, Utah. The Salt Lake products included brines, calcareous oölite, mirabilite and various forms of common salt, all obtained from the waters of the lake. A slab of the Big Skookum meteorite was obtained by partial exchange with



SKELETON OF FOSSIL SABER-TOOTH TIGER (*SMILODON CALIFORNICUS*). LOS ANGELES ASPHALT BEDS,  
LOS ANGELES, CALIFORNIA.

Gift of Messrs. E. E. Ayer, E. B. Butler, W. R. Linn, and M. A. Ryerson.



the Foote Mineral Company. From Mr. H. B. Derr were obtained 37 specimens of analyzed soils, besides limestones and clays from various localities in Missouri. From Mr. William Foshag were obtained by exchange eight specimens of rare California minerals, and from Mr. E. G. Norton three specimens of crystallized calaverite from Cripple Creek, Colorado. The principal accession by purchase was a number of specimens of the rare Carboniferous crinoid *Phalocrinus*, which had not previously been represented in the collections. Specimens of tracks of a Carboniferous batrachian were included in the same accession.

In the Department of Zoology the number of accessions during the year were as follows: Birds 143; mammals 16; fishes 276; insects 923; and shells 432. Of these, 125 of the birds were an important purchase of Dutch Guiana birds from Mr. Penard; 152 Nicaraguan butterflies were obtained from Senor Dion. Chaves of Managua; 24 species of sphinx moths were presented to the Museum by Mr. B. Preston Clark of Boston, these with one or two exceptions being new to the Museum collection and some of them very rare; also 116 Bolivian insects secured by the Collins and Day expedition to South America. There was obtained by purchase a very interesting abnormal form of *Heliconius doris viridis*. Of the 276 fishes added to the collection 265 were the gift of Dr. C. Eigenmann and were desirable acquisitions. Of the 432 shells received, 255 from southwestern United States were the gift of Mr. R. C. Orcutt; 52 specimens from the Museum's South American Expedition, and 117 from the Joseph N. Field South Sea Islands Expedition.

EXPEDITIONS AND FIELD WORK.—Dr. George A. Dorsey, to whom leave of absence had been granted for a visit to the Orient, availed himself of the opportunity of his sojourn in India to acquire an ethnological collection for the Museum with funds provided through the generosity of Mr. Homer E. Sargent, Mr. Cyrus H. McCormick and Mr. Martin A. Ryerson. A description of the collection appears elsewhere in this report.

The discontinuance of the regular zoological expedition to South America was compensated for by participation in an expedition known as the Collins-Day South American Expedition, organized and financed by Mr. Alfred M. Collins of Philadelphia and Mr. Lee Garnett Day of New York City. This expedition included besides Mr. Collins and Mr. Day and their associate, Mr. W. T. Walker, two zoological collectors, one, Mr. R. H. Becker, representing the Museum, and the other, Mr. G. K. Cherrie, representing the American Museum of Natural History of New York. The entire expenses and salaries of the collectors were generously defrayed by Mr. Collins and Mr. Day and every opportunity was afforded for work with the result that, despite a



rainy season and a limited amount of time, some 1,300 specimens of birds and mammals were secured. By special agreement these will be divided equally between the two Museums. The expedition sailed from New York December 26, 1914, and proceeded via Panama to Mollendo, Peru. From there a short trip was made to the highlands near Lake Titicaca and specimens were obtained of the larger mammals of the region, especially the guanaco or wild llama, and the vicuña. It is of great interest to note, as illustrating the scant means available for studying South American animals, that these vicuñas were the first to be brought to a North American Museum, notwithstanding the fact that the species is of relatively large size and of great economic importance. The expedition continued through the Andes to Cochabamba, Bolivia. From Cochabamba it was decided to descend to the Madeira River and the Amazon by way of the Chapare and Mamore rivers instead of by the more frequented route via the Beni River. The difficult journey was made with a train of twenty-four pack mules at considerable expense of time, money and personal hardship. The remainder of the trip was by canoe and small steamer to the Madeira-Mamore railroad by which the rapids of the Madeira were passed and thence to the Amazon at Manaus where steamships of good size were available. The collection of mammals secured by the expedition has not yet been studied and the specimens of birds, which will ultimately come to this Museum, have not been received. In September and October, Taxidermist Friesser made a successful expedition to the Olympic Mountains of the State of Washington, where, through the courtesy of state officials, he was permitted to obtain fine specimens of the Olympic or Roosevelt Elk. These and the accessory material secured at the same time will be used for a large group of these animals, which has long been planned and for which a striking background has already been painted.

The following is a list of the expeditions:

Locality	Collector	Material
British India.	Geo. A. Dorsey.	Ethnology.
Olympic Mountains.	J. Friesser.	Mammals.
Peru, Bolivia and N. Brazil.	R. H. Becker	Mammals and Birds.

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT. — The work and efficiency of the Department of Anthropology in matters of installation have been fully maintained during the year. A total of 68 new cases have been placed on permanent exhibition, many of these being completely labeled. The material installed in these cases is distributed as follows: Classical archæology 6 cases; Hopi ethnology 10 cases; Tibetan ethnology 18 cases; Chinese ethnology 8 cases; Chinese archæ-







FIGURE OF WOMAN FROM KUKUNOR REGION, IN FESTIVE COSTUME. FRONT AND BACK.

ology 11 cases; Japanese ethnology 1 case; New Caledonian ethnology 8 cases; Philippine ethnology 1 case; and Solomon Islands ethnology 5 cases. The 31 cases on the gallery relating to physical anthropology were relabeled and reinstalled; work on the cataloguing of the main collections in physical anthropology has likewise been commenced. Hall 49 has been installed with exhibits of the Mrs. T. B. Blackstone Expedition to Tibet. One group of the displays illustrates the life of the nomadic tribes of eastern Tibet, their saddlery and other means of transportation, utilization of skins, leather, and yak-hair weavings. A large coracle, the only type of boat used in Tibet, is a notable feature in these exhibits. For comparative study, Chinese saddlery is likewise shown in this section on the dummy of a horse, which is equipped with full harness. Another group of Tibetan exhibits, consisting of 7 cases, illustrates the manufacture of textiles, the process of weaving being shown by several looms, as well as the style and wear of costume. Sixteen life-size figures have been prepared with much care for faithfulness of all characteristic features. They are completely dressed in native style, even as regards the hair and hair-dressing procured in Tibet, and are thoroughly representative of the manifold tribes of central, eastern, and northeastern Tibet. A model of a woman from central Tibet is shown in festive attire complete with all jewelry. Special emphasis is laid upon the difference between the pastoral and sedentary or agricultural tribes, and upon the influence exerted upon Tibetan culture by China. In addition to the costumed figures, nine articles of clothing are exhibited on dummies, also many specimens of woollen and hempen fabrics. Jewelry from Tibet and China, formerly deposited in Higinbotham Hall, is now installed in three standard cases on slanting shelves covered with black velvet. The installation is well provided with photographs depicting the wearing of the jewelry. This installation presented technical difficulties of great complexity, all of which have been overcome. In December the three jewelry cases, also one from Hall 54, were moved to alcoves 121 and 122, North Court. Two cases containing Tibetan religious paintings were installed in Hall 49. The Chinese bronzes temporarily placed in the North Court were transferred to the East Annex and permanently installed in standard cases. They now occupy altogether eleven cases, and are arranged in strictly chronological order. In consequence of this addition, a reorganization of the Chinese Halls became necessary. The paintings were removed from Hall 43 and 44 to Hall 47 and replaced by nine cases of bronze. For technical reasons two cases of bronze have to remain in Hall 49. The interesting and instructive models of boats and palanquins, acquired at the World's Columbian Exposition, were permanently

installed in two standard cases placed in Hall 53, each model being provided with a descriptive label. The imperial jade book and jade seal presented by Mr. von Frantzius are temporarily installed in Hall 45, in such a manner that they can be freely viewed from all sides. The two detached jade tablets purchased a year ago were added to these exhibits. A special case was constructed for the large brass temple-lamp from India, secured during the time of the Columbian Exposition. The Japanese tapestry, formerly in Hall 31, was moved to Hall 56 into its appropriate surroundings. Mr. Ayer's gift of four Moro guns necessitated the reinstallation of two cases containing Moro armor. The New Caledonian collection, installed in eight cases by Assistant Curator Lewis, is especially interesting for its rare old masks and fine assortment of weapons, notably the stone-headed clubs, one of which is said to be the largest in existence, and was the property of one of the famous chiefs in New Caledonia. Other objects of significance are the house-posts and ornaments, native money, and the old-style clothing and ornaments, especially the green-stone necklaces representing the most highly prized treasures of a New-Caledonian woman. Five cases containing material from the Solomon Islands were also installed. The installation of the Stanley McCormick Hopi Collections has progressed satisfactorily, ten cases having been completed. Five of these cases comprise 150 masks and head-dresses, shown upon freshly painted plaster busts, in their proper groupings and sequence. Three cases are filled with modern domestic pottery, two of unpainted, one of painted ware, in their groupings, as recognized by the Hopi themselves. The series of fifty objects showing the manufacture of pottery is very complete and instructive. One case includes rattles of every type, in fact, all musical instruments used by the Hopi, except drums. In another case are displayed the rabbit sticks, raw skins, and the rabbit-skin robes which are purely woman's work, no man being allowed to be present during their making. In the North Court, three cases have been installed; namely one of Etruscan *Bucchero* ware variously decorated, another of vessels with red designs on black ground. The third is occupied by bronzes which include the two *cistas* purchased last year, all being obtained through the efforts of Mr. Ayer. These cases, newly installed, necessitated some rearrangement in which the two candelabra cases and one of bronze pails were moved to the east line of cases in the Court where the three cases of Irish art-work have stood for years. These had been placed previously in alcoves 121 and 122. Minor transfers of material have also been made in this Court. The two cases containing antique glass in the North Court have been reinstalled upon a new principle of open shelving



which fully exhibits the beauty of form, wonderful colors, and iridescence of these specimens. The Pompeian collection secured by the Director in San Francisco is temporarily installed in a hanging wall-case in alcove 121, North Court, and is completely labeled. When alcove 120 was vacated to make room for exhibits of the N. W. Harris Public School Extension, the Roman mills, braziers, and other objects were rearranged in the Court as best as its crowded condition would permit. A portion of the ethnological material obtained by Dr. Dorsey in India through the liberality of Messrs. Homer E. Sargent, Cyrus H. McCormick, and Martin A. Ryerson, has been placed temporarily in two wall cases in alcove 122. In H. N. Higinbotham Hall there have been some changes in installation as well as rearrangement. Hanging-cases 21 and 22, on the South Wall, were stripped of Algerian jewelry, and in its stead was placed the Turkish, Armenian, Syrian, and Arabian jewelry, formerly in case 17, along with the Bulgarian jewelry from case 19. In the vacated space in case 19 were temporarily placed Tibetan charm-boxes and earrings. Tibetan jewelry, consisting of rings, bracelets, and hairpins, was also transferred from case 20 to case 19. The Algerian jewelry from cases 21 and 22, along with a more recent accession of the same material, was installed in the new case on the East Wall of the hall. Some Colombian gold objects were taken from the floor of case 24 and placed upon the floor of case 23. When the Tibetan jewelry was removed from cases 19 and 20 for permanent installation in Hall 49, a reinstallation of case 20 was made necessary. This installation brought about some rearrangement of cases, Nos. 17 and 18 being moved from the East Wall to the North Wall, bringing all the jewelry from India into a single group. Case 23 and a new case were moved into vacated space upon the East Wall. Since Hall 48, East Annex, utilized for several years past as a work-room, was needed for the further exhibition of the Mrs. T. B. Blackstone collections, the north end of Hall 71 was cleared of all ethnological material stored there and equipped as a work-room, being in close proximity to the vast Pacific Island collections yet to be installed and stored in the West Annex, there to await removal into the new building. To better condense the ethnological material in the south end of Hall 71, the Volk collection and other material intended for exchange, as well as the large model of the Ruins of Mitla, Mexico, have been placed in Hall 68, now to be utilized for general storage. Six cases, heavily loaded with storage material, were taken from Hall 71 and placed in Hall 72 for early installation. The two cases of stored Australian material now stand in Hall 80, having been moved there from Hall 72. The drums, previously stored in Halls 79 and 80, having been shifted to Hall 68; those



two halls, with cases placed to the best advantage, will afford parking for fifty cases of the Joseph N. Field Melanesian Collections to be installed. Preservation of material, photographing, and rearrangement have necessitated work in one hundred cases of the Department during the year. Hall 48 in the East Annex was originally intended to serve as a gallery of Chinese painting. In view of the new material expected soon from San Francisco, however, this plan has been abandoned, and the hall will be reserved for the reception of the pagodas and other new acquisitions. The former plaster-room has been divided by a partition-wall into two rooms.

The Department of Botany has installed 39 new case-units in the public exhibition series, while 17 others have been reinstalled and augmented with new and interesting material. Of these cases 15 were added to the Systematic Economic Series; 37 to the North American Forestry Series; and 4 to General Dendrology. To the North American Forestry Series monographs of the following trees were added: Red or Pencil Cedar, Mountain Pine, Pitch Pine, Chestnut Oak, Yellow Locust, Honey Locust, Cork Elm, Red Spruce, Red Ash, Butternut, Chestnut, Hop-Hornbeam, Fraser's Umbrella Tree, Cucumber Tree, Beech, Sourwood, Yellow Poplar, Pennsylvania Cherry, Fraser's Fir, Sweet Buckeye, Black Willow, Sweet Birch and Yellow Birch. To the Dendrologic Series was added a display, in four cases, of the woods of the Hawaiian Islands, representing, with fair sized specimens, the trees of the islands as described in the new work of Mr. Joseph F. Rock. To the Systematic Economic Series a case was added displaying the fruits, gums, and tan and dye barks belonging to the Combretum and Mangrove families; one with similar products derived from the Combretum and Spikenard families; two cases devoted to the derivatives of the Birch family; one to those of the Willow, Myrtle and Walnut families; two to the Walnut family alone; one additional to the Oak family; one to the Sapodilla family and one each to the Spurge and the Daisy families. On account of lack of cases and cramped quarters in the rooms devoted to the working herbarium, it became necessary to entirely reorganize the collections during the year. In order that the material most frequently consulted might be readily accessible the Eurasian and African material was removed from the organized herbarium and placed in a series of metal storage cans racked in the mounting room on the first gallery; and the West Indian, Central and South American specimens rearranged in like storage cans racked above the regular herbarium cases. This divides, temporarily, the organized reference collection into three parts. In all three the plants are fully arranged in the order of modern classification. While not so conveniently referable



MODEL OF A GOLD MINE. X $\frac{1}{9}$ .



as when all like material is together, yet the collections are consistently available, until such time as they can be reassembled in the herbarium hall of the new Museum building.

In the Department of Geology a complete readjustment of the cases in Skiff Hall was made in order to give better lighting and grouping. Formerly the low cases had been arranged on one side of the hall and the high cases on the other, but as the amount of light obtained by this method of arrangement was insufficient, the cases have now been arranged so as to form a series of alcoves with the taller cases forming the sides of the alcoves and the lower ones occupying the center. The lighting by this arrangement is much more satisfactory. Six of these alcoves were placed on each side of the main passageway through the hall, the forming of these alcoves having required the readjustment of 56 cases. From most of these cases it was also necessary to entirely remove the specimens and reinstall them. In this connection the opportunity was improved to perfect the order of the specimens so as to bring related groups as close together as possible. The exterior woodwork of the cases was also entirely refinished. Space was found in the cases for several new series, among them being a series of bonanza silver ores from Mexico and a collection illustrating the nature and origin of certain "porphyry coppers." To the rare earths collection a radiograph was added made by exposing a lead object to the emanations from carnotite. This was installed with other radium ores as a means of showing the best method of detecting such ores. A portion of the collection of gold ores was removed to make room for a model of a gold mine constructed by the Assistant Curator. This model represents methods of working a small gold mine of medium richness in a vertical quartz vein six feet wide. The background and above-ground scenery were prepared from studies of Arizona landscapes from photographs made by the Curator. The model occupies a space of four by three feet with a depth of about six inches. It illustrates a mine worked by levels connected by a shaft. The ore is represented as a vein of quartz containing minute particles of free gold. At one side the vein is represented as intersected by another running from the front to the back of the model. The ground about this vein is supposed to be looser than at the side and a different method of timbering is illustrated. To illustrate the methods of removing the ore several stopes are shown as well as raises and winzes. Various features of mining equipment are also represented such as head frames, shaft house, tramways, ore cars, pump, etc. The scale of the model is five feet to the inch, and pains were taken to have it represent different features of a well managed mine as far as possible. In all parts of the economic collections



there has been a constant addition of new material in the form of single specimens or small groups. Room for these has for the most part been obtained by withdrawing older specimens from exhibition. Space for increase in the number of rare earths and tungsten ores was obtained by withdrawing a portion of the antimony collection from exhibition. A collection of rocks from German coal fields which was properly a part of the coal collections not now on exhibition was withdrawn and the space gained utilized for the display of three new collections more in harmony with adjacent exhibits. One of these is a collection of fuller's earths from the most important American localities; another is a series illustrating the raw materials, intermediate and final products of Portland cement; and the third collection is one giving a synopsis of the uses of quartz and quartz sands. In this collection numerous specimens show the more common occurrences of quartz; then the grades of quartz used for the more valuable products, such as prisms, lenses and blown quartz utensils; and a third section shows specimens of the poorer qualities of quartz used for more ordinary purposes and sands suited to many special uses. These collections were installed in Hall 35. By reinstallation and some crowding of specimens a much enlarged collection of barite has been accommodated in the space formerly devoted to fewer specimens of this mineral. To the collection illustrating products of coal tar, some of the better known medicinal substances made from it such as phenacitin and acetanilide have been added. In Higinbotham Hall all the specimens were removed from the four central gem cases, the cases lined with new white silk and the specimens reinstalled. This work was necessitated by the fact that the old linings had become worn and faded. New linings were also provided for the upper parts of these cases and shelves of finished glass supported by glass pillars were put in place of the rough shelves swinging on chains which had hitherto been used. A new series of moss agates and jaspers was installed and some other minor changes were made. In Alcove 105, leading to Higinbotham Hall, the collection numbering 163 specimens illustrating the varieties and occurrence of amber which was obtained last year was installed. This collection illustrates different forms and colors of crude amber, forms and colors of pressed amber or ambroid, carvings in amber, fossils found in amber, distillation products of amber, etc. The collection was installed on a series of glass shelves, each specimen being secured to an individual mahogany stand. In front of each specimen was placed a label secured by an individual clip. To the exhibition series of systematic minerals about fifty specimens of recent accessions were added. The series of Salt Lake products was



installed in a case with other salts in Hall 31. The fossil Carboniferous tree from Michigan obtained from the St. Louis Exposition was installed in Hall 33 in connection with other fossils from this period. The series of Carboniferous crinoids and batrachians acquired during the year was similarly installed. The work of mounting the invertebrate fossils upon tablets suitable for installation in floor cases was carried on during the year as opportunity permitted and about 300 specimens were so prepared. Practically all the Pleistocene invertebrate fossils have now been mounted in this way and some other series have been completed. The Pleistocene fossils prepared were installed temporarily in a case in Hall 33. Specimens chiefly of Pleistocene and Tertiary invertebrates which had been on exhibition were removed from two wall cases and the cases placed in position in Hall 35 to receive the skeleton of the sabre-tooth tiger and other important specimens of the large collection of vertebrate fossils from California presented by Messrs. Ayer, Butler, Linn and Ryerson. By use of these two cases it was possible to place a representative series of these fossils on exhibition. The specimens installed include a complete mounted skeleton of the sabre-tooth tiger, several skulls of the same species, several skulls and a large number of bones of the fossil wolf, skulls and limb bones of the ground sloth, limb bones of the mastodon and horse, skulls and other bones of the bison, and skulls and other bones of various vulture-like and other birds. In order to make room for the additional cases and secure a better grouping of the specimens, some readjustment of the large cases in the Hall was also made. The specimens of fossil elk skull and horns from Palos Park, Illinois, presented by Mr. H. H. Honink, were also installed in this Hall. In Hall 59 a disarticulated skeleton of the sabre-tooth tiger was installed in a table-case, with each bone labeled so that the anatomical features of the skeleton may be readily studied. In the laboratory of vertebrate palæontology a model of the jaws of the great Eocene shark *Carcharodon* was completed, pains being taken to have the anatomical details as nearly correct as possible. The jaws, as completed, have a width of over six feet and an opening of four feet. For the first row of teeth actual fossil specimens were used and for the succeeding rows casts of these. The modeling of the lines of the jaw was based on careful studies of modern sharks. By careful attention to all these details it is believed that the characters of the ancient shark jaw are reproduced with great fidelity in this model. Owing to lack of space the model has not been placed on exhibition but will be available for the new building. The mounting of the skeleton of the sabre-tooth tiger received from California was modified so as to

give greater rigidity and a more natural pose and it was placed upon a new base. A skull and jaws of the Miocene horse, *Parahippus*, were prepared for exhibition and the mounting of a skeleton of the Miocene camel *Oxydactylus* was nearly completed. The large collection of fossil bones from the Los Angeles asphalt beds, numbering nearly 3000 specimens, was taken to Whiting, Indiana, where, through the courtesy of the Standard Oil Company, complete facilities were provided for soaking the bones in naphtha and thus dissolving out the tarry material. This treatment of the specimens was necessary to avoid the slow exudation of the asphalt which experience had shown would otherwise occur and cause injury to the interiors of the cases. The generosity of the Standard Oil Company in this connection is gratefully acknowledged.

In the Department of Zoology the collection of mammals in alcohol has been overhauled and fully identified. The collections of birds, mammals and insects were disinfected. The skins of the large mammals stored in the basement of the Museum are now reasonably accessible; only little progress has been made in completing the tanning of such skins as still remain in a raw state, the skin dresser having been occupied the greater part of the year on fresh material. Three large groups of birds, provided by the Stanley Field Ornithology Fund, have been finished and placed on exhibition. They represent bird life in Tropical America. (1) Oil birds, *Steatornis caripensis*. This group shows breeding birds in a cave in which they live, and illustrates a form of bird life of great interest. The material for the group was secured by the Museum South American Expedition on the Island of Trinidad in 1914. (2) Group of Screamers and Scarlet Ibis. A striking and instructive group, also obtained by the Museum Expedition near Lake Maracaibo, Venezuela. This group contains specimens of both the curious Horned Screamer and Crested Screamer, together with a number of richly colored Scarlet Ibis, and forms one of the most attractive groups. (3) Group of American Flamingoes on their breeding ground on the Island of Great Inagua, Bahama Islands. The group shows 7 adult Flamingoes, with their peculiar cone-shaped nests, eggs, and two young birds in the nest. The painted background shows a continuation of the "rookery" which in the Inagua Colony numbered about 1,000 nests. The painted backgrounds of these groups greatly enhance their educational value, as the observer is able to become familiar with the natural environment of the species. During the year the taxidermists have been engaged in preparing an exhibition group of Alaska Moose, which is now nearly ready for installation. Considerable preliminary work has also been done on two other mammal groups, a group of



GROUP OF AMERICAN FLAMINGOES. *PHOENICOPTERUS RUBER* (LINN).  
Scene, Great Inagua Island, Bahamas.





Olympic Elk and one of the Capybara and Jaguar. A small group of Thirteen-lined Ground Squirrels or "Striped Gophers" has been completed and is ready for installation. The exhibition collection of fishes was increased by the addition of a large sectional case containing on one side two large and eighteen small groups of Florida fishes, on the other side the same number of groups of fishes from California, the latter including very fine specimens of Salmon. A large group of Flying Fish is in course of preparation. The Wild Turkey group was improved by the substitution of a fine male bird for the younger one temporarily installed when the group was made. In the same way a rather small Canada Goose was removed from the Saskatchewan group and replaced by a fine large old bird. An Asiatic Elephant and a Giraffe, which through age and imperfection were undesirable for exhibition purposes, have been withdrawn and placed in storage to be sold or exchanged. Throughout the year the reinstallation of the shell exhibit has been carried on by Assistant Curator Gerhard and Preparator Liljeblad. Four of the new A-cases have been permanently installed, and two more filled temporarily with shells which were glued on tablets last year. In addition, enough shells have been remounted to fill three more cases, for two of which labels are ready. Installing the shells on individual shelves cannot be done so expeditiously as when the specimens are mounted on tablets, for which reason the work is consuming more time than was anticipated. In the division of Osteology 2 skeletons of Porpoise and 7 skulls were degreased at the Whiting degreasing plant; 8 skeletons of animals were prepared for the Osteological study collection and 4 skeletons were remounted; 367 skulls were prepared and cleaned for the Systematic study collection.

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM OF NATURAL HISTORY.

—Early in May 1914, Mr. N. W. Harris offered to bear the expense of an exhibit at the Panama-Pacific International Exposition, of a number of cases, typical of those being circulated among the public schools of Chicago, under the auspices of The N. W. Harris Public School Extension of Field Museum of Natural History. This generous offer was approved by the Director and accepted by the President. The Curator was instructed to select such types of cases as would illustrate the nature and character of the work that was being devoted to Museum Extension. He was also instructed to make arrangements for suitable and adequate space for exhibiting the cases, to determine the architectural plans for the space, to make all arrangements for packing the cases and shipping same, and to depart for San Francisco in time to install the exhibit at the Exposition for the opening day, February 20th. Thirty-



four cases of natural history and economic subjects were selected and exhibited in the Palace of Education of the Exposition. The space allotted the exhibit, amounting to approximately 1300 square feet, was favorably and prominently located on three well traveled aisles. The exhibition of the cases was supplemented by motion pictures, illustrating the present and future Museum buildings, types of cases on standards, loading cases in delivery car, car leaving Museum, and arriving at school unloading cases, reception of cases in classroom, case on rack in classroom, pupils studying case in classroom and teacher using case as a means of teaching. These views were prefaced with an introduction on the cause and scope of the Museum Extension. The exhibit and the motion picture theatre were attended daily by large numbers of visitors, whose interests were manifested in many instances, by words of commendation for the work that is being carried on, and praise for the attractive physical features of the cases. Representatives of foreign and American institutions of learning made repeated careful and thorough examinations of the exhibit and enquiries as to methods of using the cases in schools. Japan, through its Commissioner General to the Exposition, requested several cases of economic subjects be sent to Tokyo for the purpose of studying them, with a view of introducing similar cases and the same system in the schools of Japan. Twenty-five thousand illustrated pamphlets describing in brief the Museum Extension, were circulated during the exposition period. Five thousand cards were mailed to educators of the United States and Canada inviting them to inspect the Museum exhibit at the Exposition. Doctor Maria Montessori, internationally known as an educator of children, said of this exhibit in an unsolicited letter.

"I admire very much the way in which nature is interpreted in this exhibit. The units attract the child's attention and do not teach errors.

"They truly represent nature. Besides, they have added value of permitting prolonged observation of the many details which in nature could only be seen in passing glimpses and to which it would be hard to attract the child's attention. The knowledge of these facts observed in this way makes the future observation of real nature more interesting to the child.

"I consider this collection a most desirable contribution to school work and education generally. I hope that more of these beautiful exhibits may be made."

In a competitive group this exhibit was awarded the grand prize, the highest award possible.

Many additional cases of various subjects were prepared during the year, bringing the total number of cases available for circula-

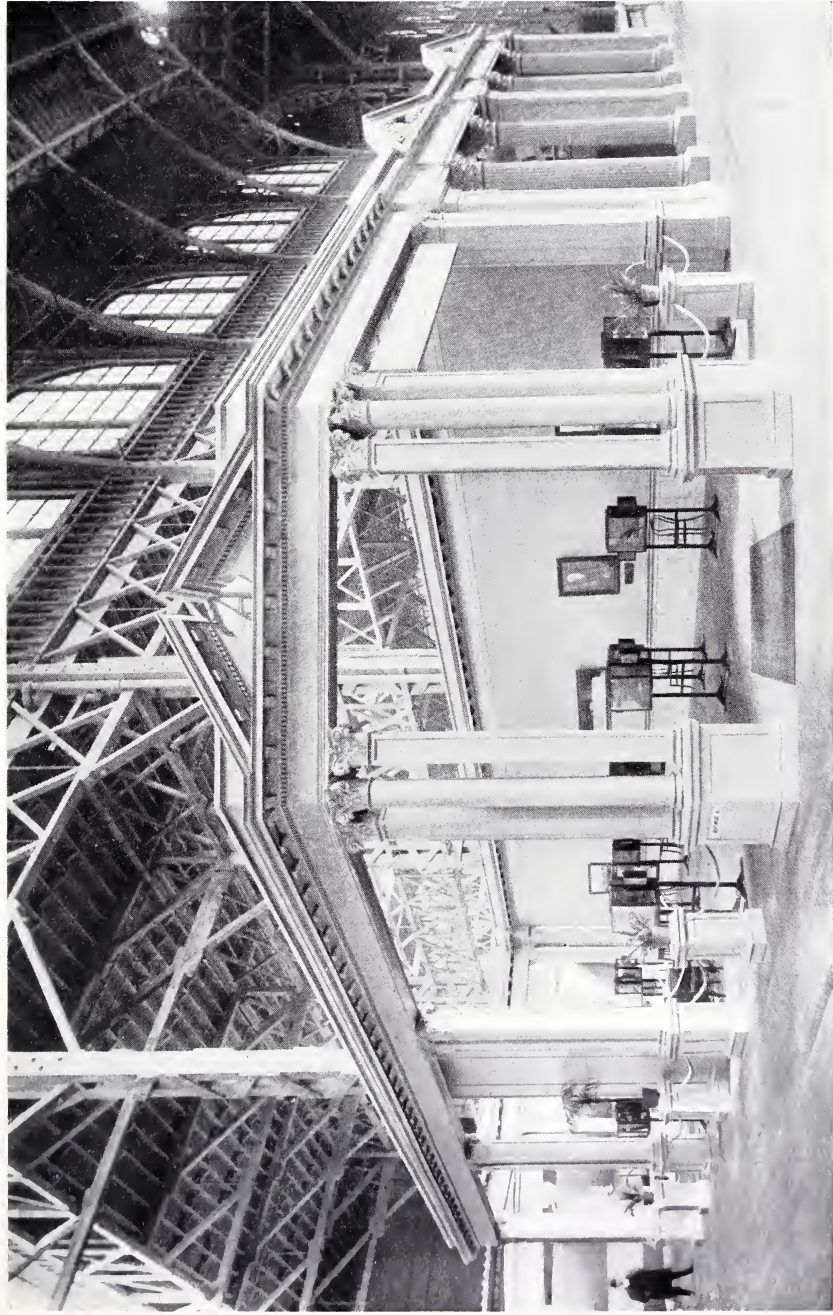


EXHIBIT OF THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM AT THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION,  
SAN FRANCISCO, 1915.



tion among the schools to about 390. While the weight of the delivery car is thought to be heavier than necessary, the designing of the carrying accommodations continues to meet with approval. It has a capacity of 45 cases. Requests for cases have been made by schools and community clubs in towns near Chicago. Delivery of cases was made to about 280 Main Schools. Each of these schools was provided with no less than 6 cases. The Board of Education continues to furnish to the classrooms, the standards upon which the cases are displayed for observation and study.

PHOTOGRAPHY AND ILLUSTRATION.—The following is a tabulation of the work performed in this Section:

	Number of Negatives made	Number of Prints made	Number of Lantern Slides made	Number of Enlarge- ments made	Number of Negatives developed for Expe- ditions	Number of 6½x8½ Posi- tives made. Used in making large Negatives
General . . . . .	12	200	..	..	..	..
Anthropology . . . . .	352	175	..	8	..	8
Botany . . . . .	5	399	2	..	..	..
Geology . . . . .	14	101	2	..	..	..
Zoology . . . . .	26	15	..	..	72	..
Harris Extension . . . . .	33	5	..	..	..	..
Distribution . . . . .	..	165	..	..	..	..
Gift . . . . .	..	410	12	..	..	..
Sale . . . . .	11	444	5	..	..	..
Totals . . . . .	453	1,914	21	8	72	8
Total number of Catalogue entries during year 1915 . . . . .						2,476
Total number of Catalogue entries to December 31, 1915 . . . . .						113,303
Total number of Record Books . . . . .						17

PRINTING.—The number of labels and other impressions made by the Section of Printing is as follows:

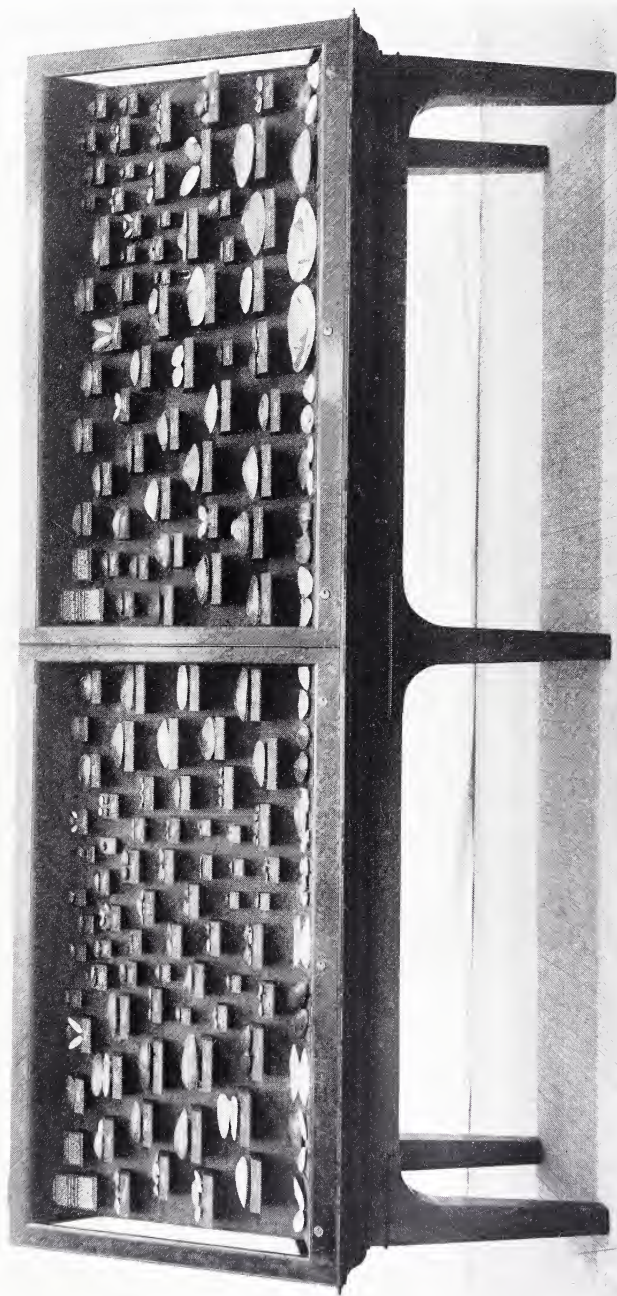
	Exhibition Labels	Other Impressions
Anthropology . . . . .	2,624	23,335
Botany . . . . .	1,065	22,950
Geology . . . . .	1,954	....
Zoology . . . . .	3,936	1,875
Library . . . . .	.....	7,225
General . . . . .	.....	35,709
N. W. Harris Public School Extension . . . . .	566	950

ATTENDANCE.—The total attendance record for the year is 194,926. Appended is a list of the classes, consisting of twenty or more pupils, that visited the Museum during the term under review:



Schools and Locations.	Teachers	Pupils
Forestville School — Forty-fifth Street and St. Lawrence Avenue . . . . .	1	25
St. Louis School — 11715 South State Street . . . . .	1	24
Francis W. Parker — 6800 South State Street . . . . .	6	38
University High School — Chicago, Illinois . . . . .	1	21
McLaren — York and Laflin Streets . . . . .	1	49
Lane Technical High School — Division and Sedgwick Streets . . . . .	1	107
Colman — 4655 South Dearborn Street . . . . .	3	42
University High School — Chicago, Illinois . . . . .	1	20
University Elementary — Fifty-ninth Street and Kenwood Avenue . . . . .	1	20
Chicago Academy of Fine Arts . . . . .	2	80
Lowell — Hirsch Street and North Spaulding Avenue . . . . .	1	30
St. Patrick's School — 2303 Park Avenue . . . . .	3	42
St. Elizabeth's School — 13 East Forty-first Street . . . . .	3	52
St. Catherine's School — 118th Street and Lowe Avenue . . . . .	2	52
Illinois University — Urbana, Illinois . . . . .	0	21
Morgan Park Prep. School — Morgan Park, Illinois . . . . .	1	23
St. Ignatius Academy — 6835 Broadway . . . . .	1	68
Parker School — 6800 South Stewart Avenue . . . . .	1	32
Holy Trinity High School — South Lincoln and West Taylor Streets . . . . .	2	27
Hessville Township School . . . . .	1	28
Raymond School — Wabash Avenue and Thirty-sixth Place . . . . .	1	38
University Elementary School — Fifty-ninth Street and Kenwood Avenue . . . . .	2	22
Hyde Park High School — Sixty-second Street and Stony Island Avenue . . . . .	2	115
University Elementary School — Fifty-ninth Street and Kenwood Avenue . . . . .	3	20
St. Bridget's School — Archer Avenue Corner of Grady Court . . . . .	1	30
Francis W. Parker — 6800 South Stewart Avenue . . . . .	1	39
Gary School — Gary, Indiana . . . . .	1	78
Brownell School — 6509 Perry Avenue . . . . .	1	38
Norwood Park School — 5850 Hurlbut Street . . . . .	1	23
Sumner School — South Kildare Street and Colorado Avenue . . . . .	1	33
Ray School — Fifty-seventh Street and Kimbark Avenue . . . . .	1	32
Lewis Champlin School — Sixty-second Street and Stewart Avenue . . . . .	2	23
Darwin School — Edgewood Avenue and Catalpa Court. . . . .	2	53
Willard School — Forty-ninth Street and St. Lawrence Avenue. . . . .	1	30
Curtis School — 115th Street and State Street . . . . .	1	42
Gladstone School — Robey Street and Washburne Avenue . . . . .	2	30
Cornell School — Seventy-fifth Street and Drexel Avenue . . . . .	1	20
Holy Cross School — Sixty-fifth Street and Maryland Avenue . . . . .	2	35
Spencer School — Park and Fiftieth Avenues . . . . .	1	20
Goodrich School — Sangamon and Taylor Streets . . . . .	1	25
Washburne School — Fourteenth between Jefferson and Union Streets . . . . .	1	23
Poe School — Fulton and One Hundred Sixth Streets . . . . .	2	30
Barnard School — Charles and One Hundred Fourth Streets . . . . .	1	21
Scanlan School — Perry Avenue between 117th and 118th Streets . . . . .	1	34





EXHIBITION CASE OF SHELLS.  
Showing method of installation.



Schools and Locations		Teacher	Pupils
Winnetka School — Winnetka, Illinois . . . . .		6	37
Zion Jewish School — 1261 South Halsted Street . . . . .		1	35
Juvenile Protective League — Blackhawk and Noble Streets . . . . .		0	22
Roseland Christian School — Roseland, Illinois . . . . .		1	23
Madison School — Seventy-fifth Street and Dorchester Avenue . . . . .		1	32
Goodrich School — Sangamon and Taylor Streets . . . . .		3	45
Wendell Philipps High School — Thirty-ninth Street and Prairie Avenue . . . . .		1	20
Englewood High School — Sixty-second Street and Stewart Avenue . . . . .		1	44
Washington School — Morgan and Grand Avenues . . . . .		1	54
Irving School — Lexington and South Leavitt Streets . . . . .		1	33
Morgan Park High School — Morgan Park, Illinois . . . . .		1	81
St. Andrews School — Hammond, Indiana . . . . .		5	83
University Elementary — Fifty-ninth Street and Kenwood Avenue . . . . .		2	23
University Elementary — Fifty-ninth Street and Kenwood Avenue . . . . .		2	24
University High School — Chicago, Illinois . . . . .		0	32
University of Chicago . . . . .		0	52
University of Chicago . . . . .		0	40
Horace Mann — Thirty-seventh Street and Princeton Avenue . . . . .		6	37
Sullivan School — Eighty-third Street and Houston Avenue . . . . .		1	27
John McLaren School — York and Laflin Streets . . . . .		1	46
Dalton School — Dalton, Illinois . . . . .		2	43
West Hammond School — Hammond, Indiana . . . . .		1	20
University of Chicago . . . . .		2	22
Flower High School — Twenty-sixth Street and South Wabash Avenue . . . . .		1	30
Jewish Training School } . . . . .		1	35
Jewish Training School } 554 West Twelfth Place . . . . .		1	41
University High School — Chicago, Illinois . . . . .		1	35
Pullman Manual Training School — Pullman, Illinois . . . . .		1	25
Parker High School — Sixty-eighth Street and Stewart Avenue . . . . .		1	47
Pullman Manual Training School — Pullman, Illinois . . . . .		1	25
Bowen High School — Eighty-ninth Street and Manistee Avenue . . . . .		0	23

Herewith are also submitted financial statements, list of accessions, names of members, etc., etc.

FREDERICK J. V. SKIFF, Director.

## FINANCIAL STATEMENT

### RECEIPTS AND DISBURSEMENTS

January 1, 1915, to December 31, 1915

#### RECEIPTS

Cash in Treasurer's hands, General Fund, December 31, 1914 . . .	\$10,828.95
Cash in Treasurer's hands, New Exhibition Cases Fund, December 31, 1914 . . . . .	3,490.27
Cash in Treasurer's hands, Endowment Sinking Fund, December 31, 1914 . . . . .	525.00
Cash in Treasurer's hands, Picture Postal Cards, December 31, 1914 . . .	433.34
Petty Cash on hand, December 31, 1914 . . . . .	739.95
Dues of Life Members . . . . .	1,000.00
Dues of Annual Members . . . . .	1,090.00
Admissions and Check Rooms . . . . .	5,418.75
Sale of Guides . . . . .	150.25
South Park Commissioners . . . . .	15,000.00
Interest on Investments and Bank Balances . . . . .	9,490.75
Field Endowment Income . . . . .	131,500.00
Field Endowment Sinking Fund . . . . .	500.00
Field Endowment Sinking Fund Investments retired . . . . .	315.00
Field Endowment Sinking Fund Income . . . . .	220.99
New Exhibition Cases Fund Investments retired . . . . .	7,070.00
New Exhibition Cases Fund Income . . . . .	620.88
New Building Moving and Furnishing Fund Income . . . . .	175.00
Stanley Field Ornithology Fund . . . . .	600.00
H. W. Jackson Library Fund Income . . . . .	58.28
Donations:	
Martin A. Ryerson . . . . .	\$1,250.00
Homer E. Sargent . . . . .	2,175.00
Cyrus H. McCormick . . . . .	1,000.00
Fritz Von Frantz . . . . .	1,500.00
Edward E. Ayer . . . . .	250.00
Edward B. Butler . . . . .	250.00
W. R. Linn . . . . .	250.00
Stanley Field . . . . .	200.00
Arthur B. Jones . . . . .	200.00
Life Memberships Fund Income . . . . .	409.94
Life Memberships Fund Investments retired . . . . .	256.69
Sale of Picture Postal Cards . . . . .	587.53
Sundry Receipts . . . . .	71.60

\$197,628.17

## DISBURSEMENTS

Salaries . . . . .		\$70,511.91
Guard Service . . . . .		11,955.87
Janitor Service . . . . .		6,757.51
Fire Protection . . . . .		4,306.72
Heat and Light . . . . .		12,125.73
Repairs and Alterations:		
Wages — Carpenters, Painters, Roofers, etc. . . . .	\$7,715.41	
Materials used — lumber, paints, oils, glass, etc. . . . .	1,179.03	8,894.44
		<hr/>
Furniture and Fixtures — Cases . . . . .		10,263.44
The Library:		
Books and Periodicals . . . . .	1,091.37	
Binding . . . . .	588.71	
Sundries . . . . .	89.05	1,769.13
		<hr/>
Collections, etc., purchased . . . . .		37,351.92
Installation expense . . . . .		2,291.83
Expeditions . . . . .		4,300.00
Publications . . . . .		1,778.50
Sections of Photography and Printing — Supplies . . . . .		353.68
General Expense Account:		
Freight, Expressage and Teaming . . . . .	2,204.13	
Stationery, Postage and Telephones . . . . .	747.45	
Liability Insurance . . . . .	663.52	
Picture Postal Cards . . . . .	645.27	
Sundries . . . . .	889.95	5,150.32
		<hr/>
Stanley Field Ornithology Fund . . . . .		724.75
Woman's Temple Building Association — Foreclosure Expenses . . . . .		2,407.18
H. W. Jackson Library Fund — Investments . . . . .		68.70
New Building Moving and Furnishing Fund — Investments . . . . .		7,245.00
Life Memberships Fund — Investments . . . . .		1,666.63
Endowment Sinking Fund — Investments . . . . .		1,509.26
Picture Postal Cards — Certificate of Deposit . . . . .		375.60
In Treasurer's hands, December 31, 1915:		
General Fund . . . . .	4,126.39	
New Exhibition Cases Fund . . . . .	917.71	
Endowment Sinking Fund . . . . .	36.00	5,080.10
		<hr/>
Petty Cash on hand, December 31, 1915 . . . . .		739.95
		<hr/>
		\$197,628.17



# ATTENDANCE AND RECEIPTS FROM JANUARY 1 TO DECEMBER 31, 1915

## ATTENDANCE.

Paid Attendance —		
Adults . . . . .	18,582	
Children . . . . .	2,210	20,792
Free Admission on Pay Days —		
School Children . . . . .	4,296	
Students . . . . .	3,043	
Teachers . . . . .	498	
Members: Corporate . . . . .	21	
Annual . . . . .	12	
Life . . . . .	5	
Officers' Families . . . . .	74	
Special . . . . .	109	
Press . . . . .	12	8,070
Admissions on Free Days —		
Saturdays . . . . .	42,223	
Sundays . . . . .	123,841	166,064
Total Attendance . . . . .		194,926
Highest Attendance on any one day (August 8, 1915) . . . . .		7,057
Highest Paid Attendance on any one day (July 5, 1915) . . . . .		605
Average Daily Admissions (363 days) . . . . .		536
Average Paid Attendance (260 days) . . . . .		79

## RECEIPTS.

Guides sold — 601 at 25 cents each . . . . .	\$ 150.25
Articles checked — 11,045 at 5 cents each . . . . .	552.25
Admissions . . . . .	4,866.50
	<hr/>
	\$5,569.00

## ACCESSIONS

### DEPARTMENT OF ANTHROPOLOGY

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AYER, E. E., Chicago.

Collection of beads and shells found in grave, with two skeletons—  
Leadbetter Landing, Benton Co., Tenn.

4 Moro bronze guns (lantaka).

161 chipped obsidian projectile points—Upper Lake, Lake County, Cal.

19 miniature Pomo baskets—Cal.

BAHR, PETER J., Shanghai, China.

6 archaic stone implements—Hupeh Province, China.

18 archæological specimens of bone, stone, and bronze—Hupeh Province,  
China.

BECKER, ROBERT H., Chicago.

1 grooved stone axe—La Paz, Bolivia.

2 pottery fragments — Ruins of Chanchan, Peru.

CARPENTER, MRS. H. I., Chicago.

18 miscellaneous ethnological objects, chiefly Alaska.

CHALMERS, W. J., Chicago.

Roman pottery lamp — Zalathna, Transylvania, Hungary.

Metal charm — Abyssinia.

21 African weapons.

1 Japanese temple gong.

DUNN, MRS. FRANK A., Milwaukee, Wis.

1 counterpane — Philadelphia, Pa.

EGYPTIAN EXPLORATION FUND.

Crystal eye set in copper, from a statue.

Piece of agate for inlaying.

2 fragments lapis lazuli from a jar.

1 lapis-lazuli bead.

EMMONS, LIEUT., G. F., Princeton, N. J.

1 graphite carving of whale — Alaska (exchange).

1 Chinese bronze figure (exchange).

FERNBACH, O. H., San Francisco, Cal.

Pre-Columbian celt of diabase — Quezaltenango, Guatemala.

FIELD MUSEUM OF NATURAL HISTORY.

Purchases:

Persian chain-mail, helmet with sword, arm-guard, hauberk, and  
gauntlet.

15 pieces prehistoric pottery — Walton County, Fla.

1 pottery fragment — Walton County, Fla.

1 skull — Walton County, Fla.

57 Pompeian antiquities in bronze, iron, pottery, and glass — Pompeii.

FISHER, MRS. H. S., Chicago.

Sandstone disc — Ponca Indians, Neb.

FRANTZIUS, FRITZ VON, Chicago.

Collection of Japanese coins, originals and reproductions, made by order of the Japanese Government, complete set consisting of 747 (more or less) metal coins, 31 pieces of paper money, and 5 implements, all mounted and labeled in Japanese, on 50 wooden plates — Tokyo, Japan.

1 imperial jade seal — Peking, China.

1 imperial jade book — Peking, China.

1 gold ring — China.

GUNSAULUS, DR. FRANK W., Chicago.

Rosary of a hundred Burmese amber beads — Peking, China.

HACKETT, E. F., Albany, New York.

2 ancient Chinese bronze coins — third century B. C.

MCCORMICK, CYRUS H.; RYERSON, MARTIN A.; SARGENT, HOMER E., Chicago.

General ethnological collection: carvings, textiles, brass, jewelry, etc. — India. Collected by Geo. A. Dorsey.

SARGENT, HOMER E., Chicago.

2 old Navajo blankets.

SMITH, MRS. CAROLINE, Chicago.

4 carved wood images — Congo, Africa.

1 mask — Congo, Africa.

1 small fragment from a tomb — Luxor, Egypt.

SPRAGUE, A. A., 2d, Chicago.

1 Navajo blanket — Southwest, U. S. A.

SUMNER, REV. W. T., Chicago.

1 prehistoric pottery jar — Arizona.

TEASON, WILLIAM, Palos Park, Ill.

1 prehistoric chert arrowhead — Palos Park, Ill.

## DEPARTMENT OF BOTANY

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

ARMOUR, ALLISON V., New York, and MILLSPAUGH C. F., Chicago.

12 herbarium specimens — Yucatan and Mexico.

BALL, CARLETON R., Washington, D. C.

3 herbarium specimens — La.

BEBB, HERBERT, Chicago.

4 herbarium specimens — Ill. and Ohio.

1 herbarium specimen — Ill.

BOTANICAL GARDENS, Sydney, N. S. W.

99 herbarium specimens — New South Wales, etc. (exchange).

BOYD, D. H., Whiting, Ind.

1 herbarium specimen — Ind.

BUREAU OF SCIENCE, Manila, P. I.

1367 herbarium specimens (exchange).

CHALMERS, W. J., Chicago.

1 blackthorn shillelagh — Ireland.

CLOKEY, IRA W., Decatur, Ill.

147 herbarium specimens — Mass., Saskatchewan, and Ill. (exchange).

COKER, W. C., Chapel Hill, N. C.

1 herbarium specimen — S. C.

COPULOS, MILTON D., Chicago.

Wax reproduction of garden cucumber.

CORY, MRS. CHAS. B., Chicago.

5 herbarium specimens — Ill.

COWLES, HENRY C., Chicago.

1 herbarium specimen — Ill.

CURLEY, F. E. A., St. Louis, Mo.

1 Philippine sugar mill — St. Louis Exposition.

DENSLOW, H. M., New York City.

18 herbarium specimens — Vermont, New Jersey, and New York.

FIELD MUSEUM OF NATURAL HISTORY.

Collated by C. F. Millspaugh:

651 herbarium specimens — various localities.

Collected by O. E. Lansing, Jr.:

17 herbarium specimens — Palos Park, Ill.

151 herbarium specimens — Lake Chicago Basin.

Purchases:

689 herbarium specimens — Leyte, P. I.

195 herbarium specimens — Alberta, Canada.

608 herbarium specimens — Mexico.

149 herbarium specimens — Porto Rico.

109 native woods — Sandwich Islands.

200 herbarium specimens — Bolivia.

260 herbarium specimens — Colo.

397 herbarium specimens — Philippine Islands.

1044 herbarium specimens — Cal.

GAUMER, DR. G. F., Yucatan, Mexico.

41 herbarium specimens — Yucatan.

GRAY, HERBARIUM, Cambridge, Mass. (exchange).

1 herbarium specimen — Mexico.

415 herbarium specimens — Texas and New Mexico.

HALL, H. M., Berkeley, Cal.

1 herbarium specimen — Cal.

HERBARIUM BOISSIER, Geneva, Switzerland.

60 herbarium specimens — Brazil (exchange).

HUTCHINSON, MRS. CHAS. L., Lake Geneva,  $\frac{1}{4}$  Wis.

1 herbarium specimen — Wis.

JOHNSON, FRANK W., Chicago.

118 herbarium specimens — Wis.

KEW HERBARIUM, London, England.

2 herbarium specimens West Indian boxwood — Venezuela.

KING, MISS ANNA, Chicago.

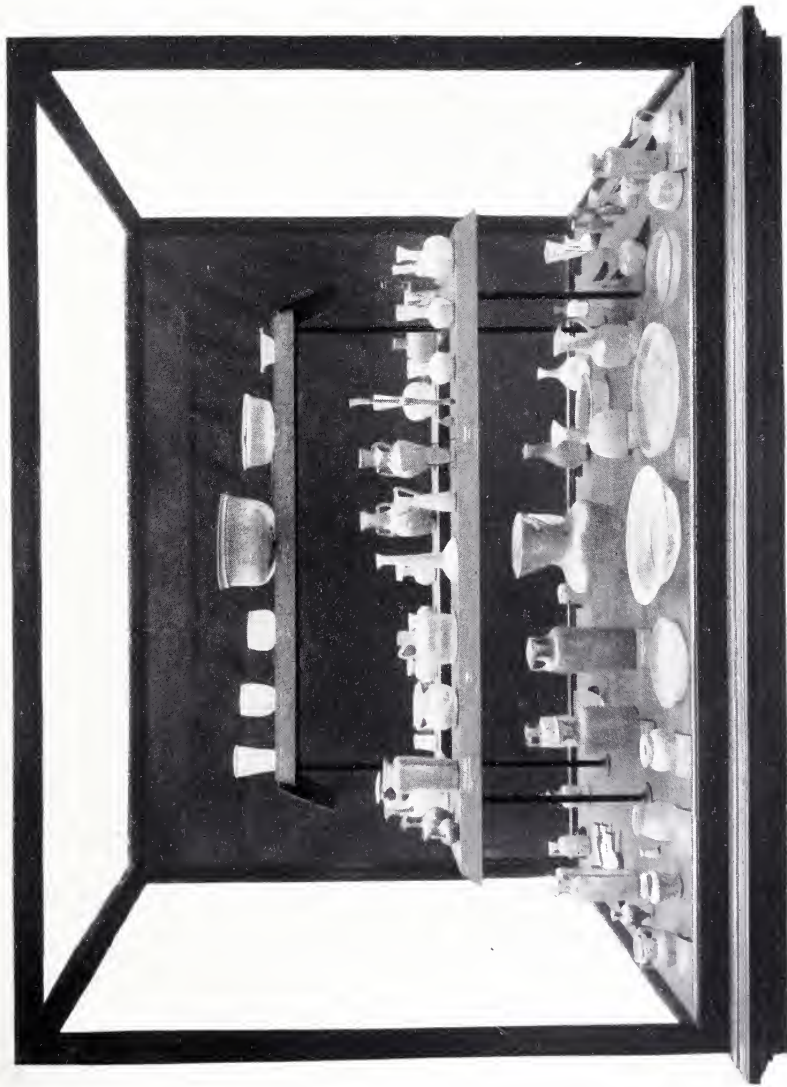
3 herbarium specimens — Mich. and Ill.

KNUDSON, PEDER, Ephraim, Wis.

1 specimen beech nuts — Ephraim, Wis.

- KUSSNER, ALBERT, Chicago.  
 1 old spinning wheel.
- LANSING, O. E., JR., Chicago.  
 1 weathered root — Ind.
- LOEB, JACOB A., Chicago.  
 24 herbarium specimens — New York.
- MANCHESTER MUSEUM, Manchester, England.  
 1 blackthorn shillelagh — Ireland.  
 2 masses Kelp potash — Ireland.
- MILLSPAUGH, C. F., Chicago.  
 Wax reproduction of Japanese persimmon and of sassafras fruits.  
 2 herbarium specimens — Chicago.  
 84 herbarium specimens — Ephraim, Wis.
- MOYER, LYCURGUS R., Montevideo, Minn.  
 30 herbarium specimens — various localities.
- MUSSELMAN, V. G., Quincy, Ill.  
 2 specimens fungi — Ill.
- NATAL BOTANICAL GARDEN, Berea, Natal.  
 101 herbarium specimens — South Africa (exchange).
- NEW YORK BOTANICAL GARDEN, Bronx Park, New York City.  
 6 photographs of Wright's Cuban Coccolobi (exchange).  
 4 herbarium specimens — Porto Rico (exchange).
- OWEN, C. L., Chicago.  
 2 herbarium specimens — Ariz.
- PADILLA, SR. SISTO ALBERTO, El Salvador, San Salvador.  
 1 bundle grass — El Salvador.
- PARISH, S. B., San Bernardino, Cal.  
 10 herbarium specimens — Nev. and Cal.
- PARKE, DAVIS & COMPANY, New York.  
 1 herbarium specimen — Yucatan.
- PFEIFFER, MISS NORMA E., Chicago.  
 1 type specimen *Thismia americana* — Ill.
- SHERFF, EARL E., Chicago.  
 1 herbarium specimen — France.  
 672 photographs of type sheets of *Bidens* and *Cosmos*.  
 232 herbarium specimens — Ill. and Ind.
- SMITH, HURON H., Portland, Oregon.  
 53 herbarium specimens — Oregon.
- TYRELL, E. R., Chicago.  
 1 fungus — Chicago.  
 1 fungus *Crucibulum vulgare* — Chicago.
- U. S. DEPT. OF AGRICULTURE, Washington, D. C.  
 47 herbarium specimens — Siberia and China (exchange).
- U. S. NATIONAL HERBARIUM, Washington, D. C.  
 228 herbarium specimens (exchange).  
 201 herbarium specimens of grasses (exchange).
- UNIVERSITY OF CALIFORNIA, Berkeley, Cal.  
 2 portions of type plants — Mexico.
- WILBER, MARSHALL D., Chicago.  
 4 specimens Malayan plantation rubber.





A CASE OF ANTIQUE GLASS IN NORTH COURT.  
Showing new method of shelf installation.



## DEPARTMENT OF GEOLOGY

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

ALEXANDER, W. B., Scales Mound, Ill.

3 specimens vanadinite — Tucson, Ariz.

AYER, E. E.; BUTLER, E. B.; LINN, W. R.; RYERSON, M. A., Chicago.

2111 specimens fossil vertebrates — Rancho La Brea, Cal.

BAEKELAND, DR. L. H., Yonkers, New York.

1 specimen bakelite.

BAILEY, DR. E. S., Chicago.

2 specimens glass colored by mesothorium.

BEBB, DR. WM., Chicago.

532 specimens bones of fossil vertebrates — Rancho La Brea, Cal.

BRADFORD, PERRY, Centerton, Ind.

5 specimens sapphire — Centerton, Ind.

BRITISH COMMISSION, LOUISIANA PURCHASE EXPOSITION, St.  
Louis, Mo.

1 specimen magnesite — India.

1 specimen manganese ore — India.

BROWN, MRS. A. S., East Stoneham, Maine.

1 feldspar crystal — East Stoneham, Maine.

CHALMERS, THOS. S., Chicago.

1 specimen gold ore—Smuggler—Union Mine, Telluride, Colo.

CHALMERS, WM. J., Chicago.

60 specimens minerals and ores — various localities.

1 specimen silver-lead ore — Kellogg, Idaho.

2 specimens gold — West Coast of Africa.

CHEROKEE CHEMICAL CO., Kings Creek, S. C.

2 specimens barite — Kings Creek, S. C.

COLORADO-YULE MARBLE CO., Marble, Colo.

6 polished slabs Colorado-Yule marble — Marble, Colo.

DERR, H. B., Sikeston, Mo.

3 specimens St. Peter sandstone — Utica, Ill. (exchange).

1 specimen molding sand — Utica, Ill. (exchange).

1 specimen furnace sand — Utica, Ill. (exchange).

30 specimens soils, ochers, clays, etc.—Missouri (exchange).

DESERET MUSEUM, Salt Lake City, Utah.

15 specimens tetrahedrite and pyrite — Bingham, Utah (exchange).

15 specimens products of Great Salt Lake — Great Salt Lake, Utah  
(exchange).

DUREX CHEMICAL WORKS, New York City.

1 specimen barite — Sweetwater, Tenn.

FARNSWORTH, J. E. and R. M., Lancaster, Mass.

1 specimen fuller's earth — Lancaster, Mass.

FIELD, STANLEY, and JONES, ARTHUR B., Chicago.

2 meteorites — Blanket, Texas.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by O. C. Farrington:

3 specimens granite — Pike's Peak, Colo.

6 specimens gypsum — Garden of the Gods, Colo.

Collected by H. W. Nichols:

5 specimens ores, rocks and fossils — Stony Creek, Granite Co., Mont.

Made in the Departmental laboratories:

1 mine model.

Purchases:

3 specimens volcanic bombs — Idaho.

4 specimens sand-faceted pebbles — Cape Cod, Mass.

5 specimens gold ore — Cripple Creek, Colo.

17 specimens crinoids and other fossils — Kansas City, Mo.

1 specimen Big Skookum meteorite — Yukon Dist., Alaska.

FISHER, MRS. H. S., Chicago.

41 specimens minerals and fossils — various localities.

FLORIDIN CO., Warren, Pa.

6 specimens crude and ground fuller's earth — Quincy, Fla.

FOSHAG, WM., Berkeley, Cal.

8 specimens minerals — Riverside, Cal. (exchange).

GEOLOGICAL SURVEY OF INDIA, Calcutta, India.

3 specimens laterite — Kalahandi, India.

GREEN, JAMES A., Chicago.

1 fossil elk antler — Palos Park, Ill.

1 portion deer antler — Palos Park, Ill.

HANINK, H. H., Palos Park, Ill.

1 fossil elk skull with antlers — Palos Park, Ill.

JEWELL, FRED, Osborne, Kan.

6 specimens fossils — Harlan, Kan.

KRANTZ, DR. F., Bonn, Germany.

1 specimen fossil lizard — Solenhofen, Germany (exchange).

KREBS PIGMENT AND CHEMICAL CO., Newport, Del.

2 specimens barite — Cartersville, Ga.

LESTER CLAY CO., Jacksonville, Fla.

1 specimen each ground and raw fuller's earth — Attapulugus, Ga.

MALLINCKRODT CHEMICAL WORKS, St. Louis, Mo.

1 specimen acetanilide.

1 specimen acetphenetidin.

MANATEE FULLER'S EARTH CORPORATION, Ellenton, Fla.

5 specimens fuller's earth — Ellenton, Fla.

MARSH, C. H., Marshfield, Ore.

3 specimens ores — Ore.

1 specimen natrolite — Myrtle Point, Ore.

MINING MUSEUM, Sydney, New South Wales.

1 print etching figures of Delegate meteorite.

MOSHER, J. H., Glendive, Mont.

8 specimens jasper (cut).

4 specimens agatized wood (cut).

2 specimens moss agate (cut).

1 specimen moss agate pebble (polished).

13 specimens moss agate and jasper — Glendive, Mont. (loan).

NICHOLAS, FRANCIS C., Tucson, Ariz.

1 specimen tungsten ore — Las Guijas, Ariz.

9 specimens copper ores — Nogales, Ariz.

- NORTON, E. G., Chicago.  
3 specimens calaverite — Cripple Creek, Colo. (exchange).
- O'CONNOR, E. S., Mayville, Wis.  
9 specimens iron ore — Mayville, Wis.
- PATTEE, FRED, Chicago.  
6 specimens rock phosphate — Cokeville, Wyo.  
1 specimen argillaceous chalk — Cheyenne, Wyo.  
1 specimen conglomerate — Cheyenne, Wyo.  
25 specimens asbestos, gold and copper ores, etc.— various localities.  
9 specimens copper ore — Globe, Ariz.  
15 specimens vanadium ore — Globe, Ariz.  
3 specimens barite — Wyo.  
3 specimens gold, silver, copper and manganese ores — Ariz. and Wyo.
- PENNSYLVANIA SALT MFG. CO., Natrona, Pa.  
1 specimen pyrite — Rio Tinto, Spain.
- PIERCE, FRANKLIN, Chicago.  
1 specimen eroded quartz — Adamana, Ariz. (loan).
- ROSENBAUM, RUDOLPH R., Chicago.  
2 specimens grahamite — Sardis, Okla.  
1 specimen impsonite — Sardis, Okla.
- ROSS, D. M., Etna, Wyo.  
1 specimen fossil crinoids — Etna, Wyo.
- SCHALL, GEO., Chicago.  
1 specimen schist — Chicago.
- SCOTT, GEO. S., New York City.  
1 specimen psittacinite — Bisbee, Ariz. (exchange).
- TEASON, WM., Palos Park, Ill.  
14 specimens trilobites and other fossils — Palos Park, Ill.  
3 specimens marcasite concretions — Palos Park, Ill.
- THOMPSON, WEINMAN & CO., Nicholasville, Ky.  
1 specimen barite — Nicholasville, Ky.
- TOWER, RAY J., Greenville, Mich.  
1 specimen core sand — Greenville, Mich.  
1 specimen core — Greenville, Mich.
- WILEY, JOHN, Florissant, Colo.  
1 specimen petrified wood — Florissant, Colo.
- WILLIAMS, C. K. COMPANY, Easton, Pa.  
1 specimen talc — Easton, Pa.  
2 specimens ground talc — Easton, Pa.
- WOOD, H. R., Prescott, Ariz.  
4 specimens tungsten ore — Maricopa Co., Ariz.
- ZIEGE, MAX E., Joy, Nevada.  
33 specimens ores — Ruby Mountain Dist., Nevada.

## DEPARTMENT OF ZOÖLOGY

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

AMERICAN MUSEUM OF NATURAL HISTORY, Central Park, New York City.

2 young flamingoes (exchange).



ARMSTRONG, EDWARD E., Chicago.

1 silver haired bat.

BATY, W. L., South Butte, Mont.

2 flying squirrels — South Butte, Mont.

2 American magpies — South Butte, Mont.

CLAFLIN, B. A., Green Bay, Wis.

1 abnormal domestic duck — Green Bay, Wis.

CLARK, B. PRESTON, Boston, Mass.

24 species hawk-moths.

CURLEY, F. E. A., St. Louis, Mo.

2 jaw bones of whale.

DOUBLER, L., Chicago.

1 ensign fly — Chicago.

1 beetle — Ft. Jennings, Ohio.

EIGENMANN, C. H., Bloomington, Ind.

265 fishes (43 species) — Colombia and Ecuador.

FIELD STANLEY, Chicago.

6 scarlet ibis — Miritiba, Brazil.

109 bird skins — Dutch Guiana.

1 flamingo — Fla.

FIELD MUSEUM OF NATURAL HISTORY.

Collected by R. H. Becker:

1 cockroach — Trinidad, S. A.

Collected by W. J. Gerhard:

87 dragon-flies, grasshoppers, bugs, butterflies, moths, beetles, flies,  
bees, wasps and parasites—N. Ind. and Ill.

Collected by J. Friesser:

7 mammals — Wash.

1 beetle — Wash.

Collected by A. B. Lewis:

105 shells — Bismarck Archipelago.

12 shells — Malekula, New Hebrides.

Collected by W. H. Osgood:

50 shells — La Vina, Peru.

2 shells — Balsas, Peru.

Purchases:

1 Alaskan moose — Kenai Peninsula, Alaska.

1 butterfly — Muzo, Colombia.

1 passenger pigeon.

5 frogs — Brownsville, Texas.

8 shells — Brownsville, Texas.

3 passenger pigeons — New York.

1 Eskimo curlew — Canada.

FRIESSER, JULIUS, Chicago.

1 snowy owl — Chicago.

1 wild turkey egg.

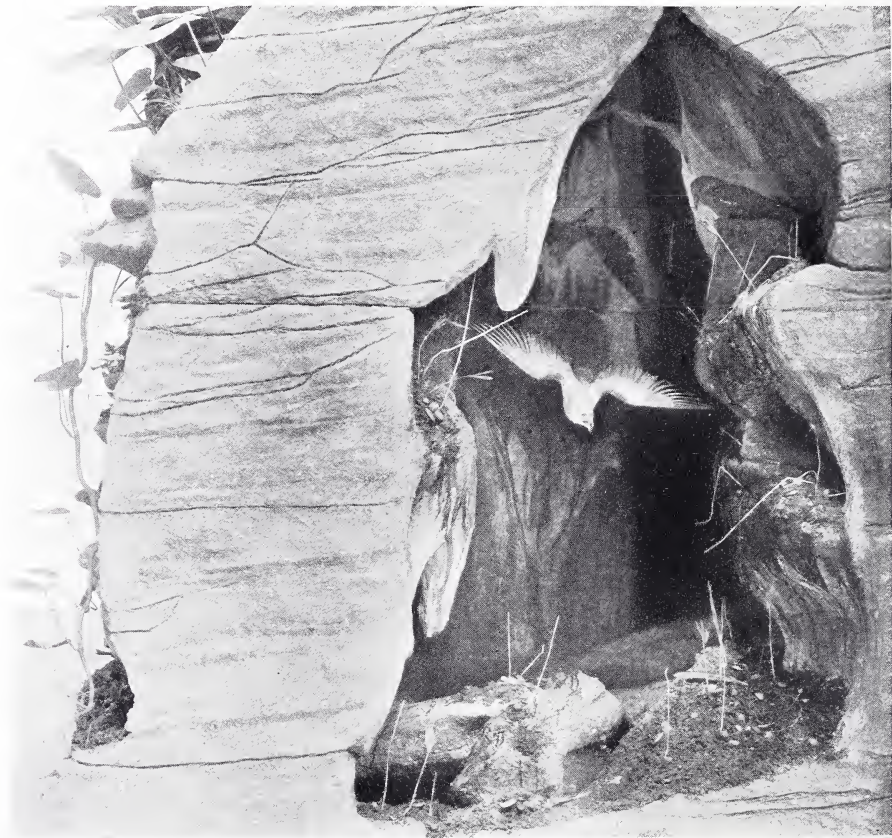
GILL, DR. GEO. M., Lebanon, Tenn.

2 beetles — Lebanon, Tenn.

1 horned corydalis — Lebanon, Tenn.

9 parasites—Lebanon, Tenn.





GROUP OF OIL BIRDS. *STEATORNIS CARIPENSIS* (HUMBOLD)  
Scene, section of cave, Trinidad Island, W. I.

- HENN, A. W., Bloomington, Ind.  
1 deer skull — Ecuador.  
1 agouti skull — Colombia.  
1 rabbit skull — Ecuador.  
1 pair deer horns — Colombia.
- HALL, CATHERINE J. and MARTHA O., Chicago.  
1 parrot.
- HEIMSTREET, DR. THOS. B., Troy, New York.  
1 long-billed curlew—Canada.
- LILJEBLAD, E., Chicago.  
27 cicadas, flies, beetles, wasps, parasites, etc. — Ind. and Ill.
- LINCOLN PARK ZOO, Chicago.  
1 orang-outang (in flesh).
- ORCUTT, C. R., San Diego, Cal.  
255 shells — Cal., Texas, and Mexico.
- PRAY, LEON L., Chicago.  
1 calico bass — Jackson Park Lagoon, Chicago.
- RODWAY, J., Georgetown, British Guiana.  
2 South American sparrow hawks (exchange).
- ROMANO, JOE, Chicago.  
2 pigeons — Jackson Park, Chicago.  
1 English sparrow — Jackson Park, Chicago.
- SEWARD, MRS. EMMA MAY, Chicago.  
1 saw-fish — Ft. Meyers, Fla.  
1 alligator (spoiled) — Ft. Meyers, Fla.
- SIEGEL, COOPER & CO., Chicago.  
1 lemur—Madagascar.
- SMITH, HURON H., Ingalls, Ind.  
1 red-shouldered hawk — Ingalls, Ind.
- STODDARD, H. L., Chicago.  
5 bird lice — Dune Park, Ind.  
2 louse-flies — Hyde Ridge, Ill.
- UMBACH, L. M., Naperville, Ill.  
10 bugs — Naperville, Ill.
- VOOGDT, CAPT.  
1 emu egg — New Guinea (exchange).
- WELCH, WILLIAM, Chicago.  
1 lamprey — Jackson Park Lagoon, Chicago.
- WELD, L. W., Evanston, Ill.  
4 gall insects — State of Michoacan, Mexico.  
3 gall insect guests — State of Michoacan, Mexico.
- WESTCOTT, DR. O. S., Oak Park, Ill.  
2 jumping plant-lice.  
8 dragon-flies — Ill., Fla., Cal., Mexico, and British Guiana.
- WICKER, MISS CAROLYN, Chicago.  
1 mounted ruff of a bustard — India.
- WICKHAM, H. F., Iowa City, Iowa.  
3 moths — Koehler, N. M.

WILLIAMSON, E. B., Bluffton, Ind.

3 red-tailed hawks — Bluffton, Ind.

1 loon — Bluffton, Ind.

1 barn owl — Bluffton, Ind.

WOLCOTT, A. B., Chicago.

4 salamanders — Mineral Springs, Ind.

18 dragon-flies, bugs, beetles, flies, moths and wasps — Northern Illinois.

## SECTION OF PHOTOGRAPHY

(ACCESSIONS ARE BY GIFT UNLESS OTHERWISE DESIGNATED.)

LAUFER, BERTHOLD, Chicago.

188 mounted photographs of scenes and types of natives from Saghalin and Amur region.

FIELD MUSEUM OF NATURAL HISTORY.

Made by the section:

453 negatives of Museum specimens, etc., 1914 prints from same, 21 lantern slides, 8 enlargements, 72 negatives developed for Museum field expeditions, 8 positives for use in making large negatives.

HARRISON, WM. PRESTON, Chicago.

35 photographs of South Sea Islanders.

## THE LIBRARY

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Agricultural Experiment Station, Auburn . . . . . 2

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#### ARKANSAS

Agricultural Experiment Station, Fayetteville . . . . . 1

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Agricultural Experiment Station, Berkeley . . . . . 7

California Academy of Sciences, San Francisco . . . . . 2

California Fish and Game Commission, Sacramento . . . . . 8

California State Board of Forestry, Sacramento . . . . . 1

California University, Berkeley . . . . . 16

Cooper Ornithological Club, Hollywood . . . . . 2

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Southern California Academy of Sciences, Los Angeles . . . . . 1

State Mining Bureau, Sacramento . . . . . 1

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Agricultural Experiment Station, Fort Collins . . . . . 10

Colorado College, Colorado Springs . . . . . 3



Colorado Museum of Natural History, Denver . . . . .	3
Colorado Scientific Society, Denver . . . . .	1
State Bureau of Mines, Denver . . . . .	1
State Historical and Natural History Society, Denver . . . . .	1
University of Colorado, Boulder . . . . .	2
CONNECTICUT	
Agricultural Experiment Station, New Haven . . . . .	6
American Oriental Society, New Haven . . . . .	1
Connecticut Academy of Arts and Sciences, New Haven . . . . .	3
Connecticut Fish and Game Commission, Hartford . . . . .	1
Connecticut Geological and Natural History Survey, Hartford . . . . .	3
Hartford Public Library . . . . .	2
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DELAWARE	
Agricultural Experiment Station, Newark . . . . .	2
FLORIDA	
Agricultural Experiment Station, Tallahassee . . . . .	5
State Geological Survey, Tallahassee . . . . .	2
GEORGIA	
Geological Survey, Atlanta . . . . .	1
HAWAIIAN ISLANDS	
Agricultural Experiment Station, Honolulu . . . . .	5
Bernice Pauahi Bishop Museum, Honolulu . . . . .	2
Board of Agriculture and Forestry, Honolulu . . . . .	1
IDAHO	
Agricultural Experiment Station, Moscow . . . . .	1
University of Idaho, Moscow . . . . .	1
ILLINOIS	
Armour Institute of Technology, Chicago . . . . .	1
Art Institute of Chicago . . . . .	2
Cement World Publishing Company, Chicago (gift) . . . . .	1
Chicago, Geographic Society . . . . .	1
Chicago Historical Society . . . . .	1
Chicago Public Library . . . . .	3
Dial Publishing Company, Chicago . . . . .	2
Forest and Stream Publishing Company, Chicago . . . . .	2
Hardwood Record, Chicago (gift). . . . .	2
Inland Printer Publishing Company, Chicago . . . . .	3
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Kenfield-Leach Company, Chicago . . . . .	2
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State Geological Survey, Urbana . . . . .	5

State Historical Library, Springfield . . . . .	4
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State Museum of Natural History, Springfield . . . . .	1
University of Chicago . . . . .	43
University of Illinois, Urbana . . . . .	19
INDIANA	
Indiana Academy of Science, Indianapolis . . . . .	1
John Herron Art Institute, Indianapolis . . . . .	2
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Rose Polytechnic Institute, Terre Haute . . . . .	1
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IOWA	
Forestry Club, Ames . . . . .	2
Geological Survey, Des Moines . . . . .	1
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State College of Agriculture, Ames . . . . .	1
State Fish and Game Commission, Spirit Lake (gift) . . . . .	10
State Historical Department, Des Moines . . . . .	2
State Horticultural Society, Des Moines . . . . .	1
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KANSAS	
Academy of Science, Topeka . . . . .	1
Agricultural Experiment Station, Manhattan . . . . .	8
State Board of Agriculture, Topeka . . . . .	4
State Historical Society, Topeka . . . . .	1
University of Kansas, Lawrence . . . . .	1
KENTUCKY	
Agricultural Experiment Station, Lexington . . . . .	5
Geological Survey, Frankfort (gift) . . . . .	2
LOUISIANA	
Agricultural Experiment Station, Baton Rouge . . . . .	8
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MAINE	
Agricultural Experiment Station, Orono . . . . .	2
Bowdoin College, Brunswick . . . . .	2
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Agricultural Experiment Station, College Park . . . . .	3
Enoch Pratt Free Library, Baltimore . . . . .	2
Johns Hopkins University, Baltimore . . . . .	2
State Board of Forestry, Baltimore . . . . .	1
MASSACHUSETTS	
Agricultural Experiment Station, Amherst . . . . .	5
American Antiquarian Society, Boston . . . . .	2
Amherst College . . . . .	1
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Boston Museum of Fine Arts . . . . .	2
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Boston Society of Natural History . . . . .	1
Cambridge Public Library . . . . .	1
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Essex Institute, Salem . . . . .	2
Harvard College, Cambridge . . . . .	4
Harvard University, Cambridge . . . . .	2
Horticultural Society, Boston . . . . .	2
Institute of Technology, Boston . . . . .	2
New Bedford Free Public Library . . . . .	2
Peabody Institute, Salem . . . . .	3
Peabody Museum of American Archaeology and Ethnology, Cambridge . . . . .	2
Phillips Academy, Andover . . . . .	1
Salem Public Library . . . . .	2
Springfield Library Association . . . . .	2
Springfield Natural History Museum . . . . .	1
Williams College, Williamstown . . . . .	4
Worcester County Horticultural Society, Worcester . . . . .	1
Worcester Free Public Library . . . . .	2

## MICHIGAN

Academy of Sciences, Ann Arbor . . . . .	1
Agricultural Experiment Station, Agricultural College . . . . .	4
Detroit Museum of Art . . . . .	2
Detroit Public Library . . . . .	1
Geological and Biological Survey, Lansing . . . . .	3
Grand Rapids Public Library . . . . .	3
Michigan College of Mines, Houghton . . . . .	1
National Educational Association of the United States, Ann Arbor . . . . .	3
State Board of Agriculture, Lansing . . . . .	1
University of Michigan, Ann Arbor . . . . .	2

## MINNESOTA

Agricultural Experiment Station, St. Paul . . . . .	10
Minneapolis Historical Society, St. Paul . . . . .	3
Minnesota Forestry Board, St. Paul (gift) . . . . .	1
Minnesota Geological Survey, Minneapolis . . . . .	1
University of Minnesota, Minneapolis . . . . .	6

## MISSOURI

Agricultural Experiment Station, Columbia . . . . .	9
Bureau of Geology and Mines, Jefferson City . . . . .	1
City Art Museum, St. Louis . . . . .	1
Missouri Botanical Garden, St. Louis . . . . .	2
St. Louis Academy of Sciences . . . . .	1
St. Louis Mercantile Library Association . . . . .	1
St. Louis Public Library . . . . .	2
St. Louis University . . . . .	1
State Historical Society, Columbia . . . . .	2
University of Missouri, Columbia . . . . .	2
Washington University, St. Louis . . . . .	2

## MONTANA

Agricultural Experiment Station, Bozeman . . . . .	1
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## NEBRASKA

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University of Nebraska, Lincoln . . . . .	2
University of Nebraska Forest Club, Lincoln . . . . .	6

## NEVADA

State University, Reno . . . . .	4
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## NEW HAMPSHIRE

College of Agriculture, Durham . . . . .	4
Forestry Commission, Concord . . . . .	3

## NEW JERSEY

Agricultural Experiment Station, Trenton . . . . .	12
Craftsman, Eastwood (gift) . . . . .	2
Geological Survey, Trenton . . . . .	2
Newark Museum Association, (gift) . . . . .	1
Newark Public Library . . . . .	1
Princeton University, Princeton . . . . .	2
Stevens Institute of Technology, Hoboken . . . . .	1

## NEW MEXICO

Agricultural Experiment Station, Mesilla Park . . . . .	6
Museum of New Mexico, Santa Fé . . . . .	36

## NEW YORK

Agricultural Experiment Station, Geneva . . . . .	3
American Geographical Society, New York City . . . . .	1
American Institute of Mining Engineers, New York City . . . . .	2
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Brooklyn Institute of Arts and Sciences . . . . .	6
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Forestry Quarterly, Ithaca . . . . .	1
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Metropolitan Museum of Art, New York City . . . . .	6
Munn and Company, New York City (gift) . . . . .	2
National Association of Audubon Societies, New York City . . . . .	6
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New York Botanical Garden, New York City . . . . .	1
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Public Library, New York City . . . . .	1
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Staten Island Association of Arts and Sciences, New York City . . . . .	2
Zoölogical Society, New York City . . . . .	3

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Agricultural Experiment Station, Raleigh . . . . .	2
Elisha Mitchell Scientific Society, Chapel Hill . . . . .	1

## NORTH DAKOTA

State Historical Society, Grand Forks . . . . .	1
University of North Dakota, University . . . . .	1

## OHIO

Agricultural Experiment Station, Wooster . . . . .	30
Chemical Rubber Company, Cleveland (gift) . . . . .	1
Cincinnati Museum Association, Cincinnati . . . . .	2
Cleveland Museum of Art . . . . .	1
Cleveland Public Library . . . . .	2
Denison University, Granville . . . . .	1
Geological Survey, Columbus . . . . .	1
Lloyd Library, Cincinnati . . . . .	2
Marietta College . . . . .	1
Oberlin College . . . . .	1
State Academy of Science, Columbus . . . . .	1
State Archaeological and Historical Society, Columbus . . . . .	1
State University, Columbus . . . . .	18
University of Cincinnati . . . . .	2
Wilson Ornithological Club, Oberlin . . . . .	1

## OKLAHOMA

Geological Survey, Norman . . . . .	4
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## OREGON

Agricultural Experiment Station, Corvallis (gift) . . . . .	6
State Board of Forestry, Salem . . . . .	1
Timberman, Portland (gift) . . . . .	1

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Agricultural Experiment Station, Harrisburg . . . . .	5
American Entomological Society, Philadelphia . . . . .	4
American Journal of Pharmacy, Philadelphia . . . . .	1
American Philosophical Society, Philadelphia . . . . .	1
Association of Engineering Societies, Philadelphia . . . . .	2
Bryn Mawr College, Bryn Mawr . . . . .	1
Carnegie Institute, Pittsburgh . . . . .	2
Carnegie Library, Pittsburgh . . . . .	6
Carnegie Museum, Pittsburgh . . . . .	3
Delaware County Institute of Science, Media . . . . .	1
Dropsie College, Philadelphia . . . . .	1
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Franklin Institute, Philadelphia . . . . .	2
Pennsylvania Department of Forestry, Harrisburg (gift) . . . . .	1
Pennsylvania Museum and School of Industrial Art, Philadelphia . . . . .	1
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Philadelphia Commercial Museum . . . . .	1
Philadelphia Numismatics and Antiquarian Society . . . . .	1
State Department of Agriculture, Harrisburg . . . . .	2



Topographic and Geologic Survey, Pittsburgh . . . . .	4
United States Indian School, Carlisle . . . . .	2
University of Pennsylvania, Philadelphia . . . . .	6
Wagner Free Institute of Science, Philadelphia . . . . .	1
Wistar Institute of Anatomy and Biology, Philadelphia . . . . .	8
Wyoming Historical and Geological Society, Wilkes-Barre . . . . .	1
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Bureau of Education, Manila . . . . .	3
Department of the Interior, Bureau of Science, Manila . . . . .	4
Philippine Library, Manila . . . . .	1
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Providence Public Library . . . . .	2
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Charleston Museum . . . . .	1
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Agricultural Experiment Station, Brookings . . . . .	7
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Agricultural Experiment Station, Nashville . . . . .	3
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State Horticultural Commission, Salt Lake City . . . . .	1
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Geological Survey, Burlington . . . . .	1
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Agricultural Experiment Station, Morgantown . . . . .	6
University of West Virginia, Morgantown . . . . .	1

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South African Museum, Cape Town . . . . .	2
Transvaal Museum, Pretoria . . . . .	I

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Museo Nacional, Buenos Aires . . . . .	2
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Australian Museum, Sydney . . . . .	3
Australian Ornithologists' Union, Melbourne . . . . .	I
Botanic Gardens and Government Domains, Sydney . . . . .	I
Department of Agriculture, Adelaide . . . . .	I
Department of Agriculture, Hobart, Tasmania . . . . .	I
Department of Agriculture, Melbourne . . . . .	I
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Field Naturalists' Club, Brisbane . . . . .	I
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Government of the Commonwealth, Melbourne . . . . .	5
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Royal Zoological Society of New South Wales, Sydney . . . . .	I

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Royal Agricultural and Commercial Society, Georgetown . . . . .	I
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Department of Agriculture, Ottawa . . . . .	14
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Department of the Interior, Geological Survey, Ottawa . . . . .	32
Department of Lands, Victoria . . . . .	I
Department of Marine and Fisheries, Ottawa . . . . .	2
Department of Mines, British Columbia . . . . .	2
Department of Mines, Ottawa . . . . .	2
Minister of Education, Toronto . . . . .	2
Naturaliste Canadien, Chicoutimi . . . . .	I
Numismatic and Antiquarian Society, Montreal . . . . .	I
Ottawa Field Naturalists' Club, Ottawa . . . . .	I
Provincial Museum, Victoria . . . . .	I
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University of Toronto . . . . .	4
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Colombo Museum . . . . .	2
Royal Botanic Garden, Peradeniya . . . . .	2
CHILE	
Biblioteca Nacional, Santiago de Chile . . . . .	4
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Botanical and Forestry Department, Hong Kong . . . . .	I
Royal Asiatic Society, North China Branch, Shanghai . . . . .	I
DENMARK	
Botanical Garden, Copenhagen . . . . .	3
Naturhistorisk Forening, Copenhagen . . . . .	I
Société Botanique de Copenhagen . . . . .	I
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Zoological Gardens, Cairo . . . . .	I

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Ashmolean Natural History Society of Oxfordshire, Oxford . . . . .	1
Asiatic Society, London . . . . .	1
Brighton and Hove Natural History and Philosophical Society . . . . .	2
Bristol Museum and Art Gallery . . . . .	1
British Association for the Advancement of Science, London . . . . .	1
British Museum (Natural History), London . . . . .	16
Cambridge Antiquarian Society . . . . .	1
Cambridge Philosophical Society . . . . .	2
Cambridge University Library . . . . .	4
City of Sheffield . . . . .	1
Croydon Natural History and Scientific Society . . . . .	1
Dove Marine Laboratory, Cullercoats, Northumberland . . . . .	1
Ealing Scientific and Microscopical Society, London . . . . .	1
Entomological and Natural History Society, London . . . . .	1
Great Britain Geological Survey, London . . . . .	1
Horniman Museum, London . . . . .	2
Hull Municipal Museum, Hull . . . . .	3
Imperial Bureau of Entomology, London . . . . .	2
Imperial College of Science and Technology, London . . . . .	1
Japan Society, London . . . . .	1
Lancashire Sea Fisheries Laboratory, Liverpool . . . . .	1
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Royal Botanic Gardens, Kew . . . . .	2
Royal Colonial Institute, London . . . . .	2
Royal Geographical Society, London . . . . .	3
Royal Horticultural Society, London . . . . .	2
Royal Society, London . . . . .	2
Royal Society of Arts, London . . . . .	2
South London Entomological and Natural History Society, London . . . . .	1
Tring Zoölogical Museum . . . . .	1

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Académie des Sciences, Paris . . . . .	2
Association des Naturalistes, Levallois-Perret . . . . .	2
Ecole d'Anthropologie, Paris . . . . .	1
Muséum d'Histoire Naturelle et d'Ethnographie, Havre . . . . .	1
Société de Géographie, Toulouse . . . . .	1
Société des Etudes Scientifiques, Angers . . . . .	2
Société des Sciences Naturelles, La Rochelle . . . . .	14



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Deutsches Entomologisches Museum, Berlin . . . . .	1
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K. Bayer. Ludwig-Maximilians-Universität, Munich . . . . .	7
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K. Sachs. Gesellschaft der Wissenschaften, Leipzig . . . . .	1
Universitäts Bibliothek, Kiel . . . . .	1
Verein für Volkskunde, Berlin . . . . .	1

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Anthropological Society, Bombay . . . . .	1
Archaeological Survey, Burma . . . . .	1
Archaeological Survey, Calcutta . . . . .	23
Archaeological Survey, Peshawar . . . . .	1
Colony of Mauritius, . . . . .	1
Department of Agriculture, Bombay . . . . .	1
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Musei di Zoologia ed Anatomia Comparata, Turin . . . . .	I
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Società Romana di Antropologia, Rome . . . . .	I
Società Toscana di Scienze Naturali, Pisa . . . . .	I

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Bureau of Productive Industry Formosa Government, Taihoku . . . . .	I
Deutsche Gesellschaft für Natur- und Volkerkunde Ostasiens, Tokyo . . . . .	2
Geological Survey, Tokyo . . . . .	2
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Imperial University of Tokyo, College of Science, Tokyo . . . . .	2
Tohoku Imperial University, Sendai . . . . .	I
Tokyo Botanical Society, Tokyo . . . . .	I

## JAVA

Bataviaasch Genootschap van Kunsten en Wetenschappen, Batavia . . . . .	4
Department of Agriculture, Buitenzorg . . . . .	10
Encyclopaedisch Bureau, Batavia . . . . .	3
Jardin Botanique, Buitenzorg . . . . .	I

## MEXICO

Sociedad Científica "Antonio Alzate," Mexico . . . . .	I
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## NETHERLANDS

K. Instituut Taal-Land en Volkerkunde Nederlandsch-Indie, 'sGravenhage . . . . .	I
Museum voor Land-en Volkerkunde, Rotterdam . . . . .	I
Nederlandsche Dierkundige Vereeniging, Leiden . . . . .	2
Rijks Ethnographisches Museum, Leiden . . . . .	2
Stats Bibliotheek, Haarlem . . . . .	I

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Acclimatization Society, Wellington . . . . .	I
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Dominion Museum, Wellington . . . . .	I
Minister of Internal Affairs, Department of Education, Wellington (gift) . . . . .	I

## NORWAY

Bergen Museum . . . . .	3
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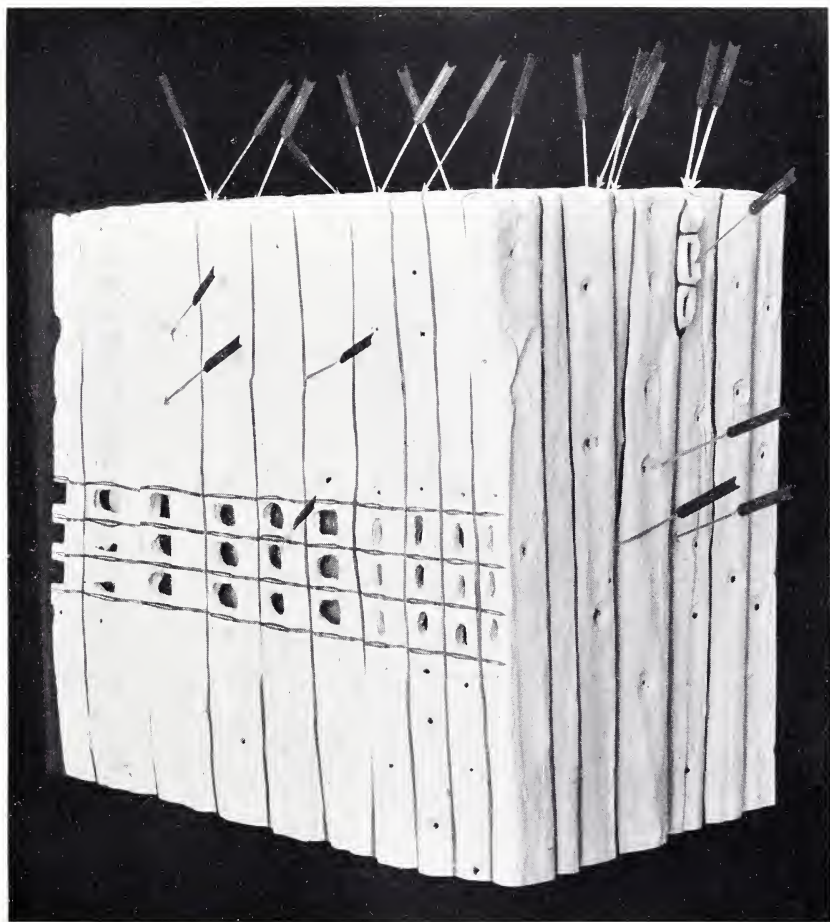
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## SCOTLAND

Dumfriesshire and Galloway Natural History and Antiquarian Society, Dumfries . . . . .	I
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Fisheries Board, Edinburgh . . . . .	3
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SPAIN	
Museo de Ciencias Naturales, Madrid . . . . .	2
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Conservatoire et Jardin Botaniques, Geneva . . . . .	1
Lausanne University . . . . .	1
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Musée Ethnographique Neuchâtel . . . . .	1
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Naturforschende Gesellschaft, Basel . . . . .	2
Naturforschende Gesellschaft, Bern . . . . .	1
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Universität Bern . . . . .	10
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National Museum of Wales, Cardiff . . . . .	1
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Agricultural Experiment Station, Porto Rico . . . . .	1
Biblioteca Nacional, Havana . . . . .	1
Department of Agriculture, Kingston . . . . .	2
Estacion Central Agronomico, Santiago de las Vegas . . . . .	2
Imperial Department of Agriculture, Barbadoes . . . . .	2
Jamaica Institute, Kingston . . . . .	1
Trinidad and Tobago Department of Agriculture, Port of Spain . . . . .	3
Universidad de la Habana, Havana . . . . .	2
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## ARTICLES OF INCORPORATION

## STATE OF ILLINOIS.

DEPARTMENT OF STATE.

WILLIAM H. HINRICHSSEN, *Secretary of State.*

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

*Whereas*, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

*Now, therefore*, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

*In Testimony Whereof*, I hereto set my hand and cause to be affixed the Great Seal of the State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSSEN,  
*Secretary of State.*

[SEAL.]

TO HON. WILLIAM H. HINRICHSSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to wit:

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archæology, Science, and History.

3. The management of the aforesaid Museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Ed. E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch, James W. Ellsworth, Allison V. Armour, O. F. Aldis, Edwin Walker, John C. Black, and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(Signed),

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohl Saat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, George F. Bissell, John R. Walsh, Chas. Fitzsimons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Eliphalet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS }  
COOK COUNTY } ss.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,

[SEAL.]

NOTARY PUBLIC, COOK COUNTY, ILL.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

#### CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the Corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.

## AMENDED BY-LAWS.

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(FEBRUARY 10, 1913.)

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## ARTICLE I.

## MEMBERS.

SECTION 1. Members shall be of five classes, Annual Members, Corporate Members, Life Members, Patrons and Honorary Members.

SEC. 2. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten dollars (\$10.00), payable within thirty days after notice of election, and within thirty days after each recurring annual date. The failure of any person to make such initiatory payment and such annual payments within said time shall, at the option of the Board of Trustees, be sufficient grounds for the forfeiture of an annual membership.

This said annual membership shall entitle the member to:

*First.*— Free admittance for the member and family, to the Museum on any day.

*Second.*— Ten tickets every year, admitting the bearer to the Museum on pay days.

*Third.*— A copy of all publications of the Museum when requested.

*Fourth.*— Invitations to all special exhibits, receptions, lectures, or other functions which may be given at the Museum.

SEC. 3. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such persons named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty dollars (\$20.00) or more. The failure of any person to make such payment within said time shall, at the option of the Board of Trustees, be ground for forfeiture of his corporate membership. Corporate Members becoming Life Members, Patrons or Honorary Members shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SEC. 4. Any person paying into the treasury the sum of five hundred dollars (\$500.00), at any one time, shall, upon the unanimous vote of the Board, become a Life Member. Life Members shall be exempt from all dues.

SEC. 5. Patrons shall be chosen by the Board upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SEC. 6. Honorary Members shall be chosen by the Board from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

## ARTICLE II.

### BOARD OF TRUSTEES.

SECTION 1. The Board of Trustees shall consist of fifteen members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled at a regular meeting of the Board, upon the nomination of the Executive Committee made at a preceding regular meeting, by a majority vote of the members of the Board present.

SEC. 2. Regular meetings of the Board shall be held on the second Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SEC. 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

## ARTICLE III.

### HONORARY TRUSTEES.

SECTION 1. As a mark of respect, and in appreciation of services performed for the Institution, those Trustees who by reason of inability, on account of change of residence, or for other cause, or from indisposition to serve longer in such capacity, shall resign their place upon the Board, may be elected, by a majority of those present at any regular meeting of the Board, an Honorary Trustee for life. Such Honorary Trustee will receive notice of all meetings of the Board of Trustees, whether regular or special, and will be expected to be present at all such meetings and participate in the deliberations thereof, but an Honorary Trustee shall not have the right to vote.

## ARTICLE IV.

### OFFICERS.

SECTION 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary, and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the second Monday of January of each year, and shall be called the Annual Meeting.

SEC. 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SEC. 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.



## ARTICLE V.

## THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation, except as hereinafter provided. He shall make disbursements only upon warrants drawn by the Director and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrants shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed. It shall be no part of the duties of the Treasurer to see that the warrants have been issued in conformity with such vouchers.

SEC. 2. The securities and muniments of title belonging to the corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer, except as hereinafter provided. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SEC. 3. The Treasurer shall give bond in such amount, and with such sureties, as shall be approved by the Board of Trustees.

SEC. 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director, and the Chairman of the Administration Committee. All vouchers executed for expenditures for the construction or reconstruction of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or in any way having to do with the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

SEC. 5. The Harris Trust and Savings Bank of Chicago shall be Custodian of "The N. W. Harris Public School Extension of Field Museum" fund. The Bank shall make disbursements only upon warrants drawn by the Curator of "The N. W. Harris Public School Extension of Field Museum of Natural History" and countersigned by the Auditor of Field Museum of Natural History. In the absence or inability of the said officers, warrants may be signed by such officers as shall be authorized by special resolution of the Board of Trustees of Field Museum of Natural History. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved by the officers above designated. It shall be no part of the duties of the Bank to see that the warrants have been issued in conformity with such vouchers.

## ARTICLE VI.

## THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of the Museum, and shall control the operations of the insti-

tution, subject to the authority of the Board of Trustees and its Committees. The Director shall be the official medium of communication between the Board, or its Committees, and the scientific staff and maintenance force.

SEC. 2. There shall be four scientific departments of the Museum — Anthropology, Botany, Geology, and Zoölogy, each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SEC. 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month. At the Annual Meeting, the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

## ARTICLE VII.

### AUDITOR.

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board. He shall certify to the correctness of all vouchers for the expenditure of the money of the corporation.

## ARTICLE VIII.

### COMMITTEES.

SECTION 1. There shall be five Committees as follows: Finance, Building, Auditing, Administration, and Executive.

SEC. 2. The Finance and Auditing Committees shall each consist of three members, and the Building and Administration Committees shall each consist of five members. All members of these four Committees shall be elected by ballot by the Board at the Annual Meeting, and shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairman by the order in which the members are named in the respective Committee; the first member named shall be Chairman, the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession to the Chairmanship being in this order in the event of the absence or disability of the Chairman.

SEC. 3. The Executive Committee shall consist of the President of the Board the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Administration Committee, the Chairman of the Auditing Committee, and two other members of the Board to be elected by ballot at the Annual Meeting.

SEC. 4. Four members shall constitute a quorum of the Executive Committee; three members shall constitute a quorum of the Administration Committee, and in all other standing Committees, two members shall constitute a quorum. In the

event that, owing to the absence or inability of members, a quorum of the regularly elected members cannot be present at any meeting of any Committee, then the Chairman thereof, or his successor, as herein provided, may summon any member of the Board of Trustees to act in place of the absentee.

SEC. 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest funds, subject to the approval of the Board.

SEC. 6. The Building Committee shall have supervision of the construction, reconstruction, and extension of any and all buildings used for Museum purposes.

SEC. 7. The Executive Committee shall be called together from time to time as the Chairman may consider necessary, or as he may be requested to do by three members of the Committee, to act upon such matters affecting the administration of the Museum as cannot await consideration at the Regular Monthly Meetings of the Board of Trustees. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommendations as to the expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the respective Committees shall be considered as authorized to make the expenditures detailed therein. No increase in the expenditures under any items of the Budget shall be made, except by authority of the Board of Trustees, but the Executive Committee shall have authority, in cases of emergency, to expend a further total sum not exceeding two thousand dollars in any one month.

SEC. 8. The Administration Committee shall have general supervision of the affairs of the Museum. The Committee shall hold one meeting each month with the Director at the Museum within a week preceding each Monthly Meeting of the Board of Trustees.

SEC. 9. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SEC. 10. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SEC. 11. The President shall be ex-officio a member of all Committees and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

## ARTICLE IX.

### NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board, each year a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, the Administration Committee, and the Auditing Committee, and for two members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting and voted upon at the following Annual Meeting in January.

## ARTICLE X.

SECTION 1. Whenever the word "Museum" is employed in the By-Laws of the Corporation, it shall be taken to mean the building in which the Museum as an Institution is located and operated, the material exhibited, the material in study collections, or in storage, furniture, fixtures, cases, tools, records, books, and all appurtenances of the Institution, and the workings, researches, installations, expenditures, field work, laboratories, library publications, lecture courses, and all scientific and maintenance activities.

SEC. 2. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.





GROUP OF SCREAMERS. *Palmadila cornuta* and *Chauna chauraria* and SCARLET IBIS *Guara rubra*.  
Scene, Lake Maracaibo, Venezuela, S. A.





## HONORARY MEMBERS.

EDWARD E. AYER  
HARLOW N. HIGINBOTHAM  
CHARLES B. CORY

STANLEY McCORMICK  
MRS. TIMOTHY B. BLACKSTONE  
NORMAN W. HARRIS

### DECEASED.

ROBERT F. CUMMINGS  
GEORGE M. PULLMAN  
MARY D. STURGES

## PATRONS.

ALLISON V. ARMOUR  
EDWARD B. BUTLER  
ALBERT M. COLLINS  
LEE GARNET DAY  
ERNEST R. GRAHAM  
NORMAN W. HARRIS  
CHARLES L. HUTCHINSON

VERNON SHAW KENNEDY  
GEORGE MANIERRE  
CHARLES H. MARKHAM  
JOHN S. MILLER  
JOHN BARTON PAYNE  
FREDERICK J. V. SKIFF  
WILLARD A. SMITH

### DECEASED.

DANIEL H. BURNHAM  
JOSEPH N. FIELD

FREDERICK W. PUTNAM  
WILLIAM I. BUCHANAN  
EDWIN WALKER

## CORPORATE MEMBERS.

ADAMS, GEORGE E.	HARRIS, NORMAN W.
ALDIS, OWEN F.	HIGINBOTHAM, H. N.
ARMOUR, ALLISON V.	HUTCHINSON, CHARLES L.
AYER, EDWARD E.	
	JONES, ARTHUR B.
BARTLETT, A. C.	KEEP, CHAUNCEY
BLACK, JOHN C.	
BLAIR, WATSON F.	KENNEDY, VERNON SHAW
BUTLER, EDWARD B.	KOHLSAAT, HERMAN H.
CHALMERS, W. J.	LATHROP, BRYAN
CHATFIELD-TAYLOR, H. C.	
CLARK, JOHN M.	McCORMICK, CYRUS H.
COLLINS, ALBERT M.	MARKHAM, CHARLES H.
CRANE, RICHARD T.	MANIERRE, GEORGE
	MILLER, JOHN S.
DAY, LEE GARNET	MITCHELL, JOHN J.
EASTMAN, SIDNEY C.	PAYNE, JOHN BARTON
ELLSWORTH, JAMES W.	PECK, FERD. W.
	PORTER, GEORGE F.
FIELD, MARSHALL III	
FIELD, STANLEY	RYERSON, MARTIN A.
GAGE, LYMAN J.	SKIFF, FREDERICK J. V.
GETTY, HENRY H.	SMITH, WILLARD A.
GRAHAM, ERNEST R.	SPRAGUE, A. A., 2ND.
GUNSAULUS, FRANK W.	STONE, MELVILLE E.
GUNTHER, C. F.	

---

## DECEASED.

ARMOUR, PHILIP D.	FITZSIMONS, CHARLES
BAKER, WILLIAM T.	HALE, WILLIAM E.
BISSEL, GEORGE F.	HARPER, WILLIAM R.
BLATCHFORD, E. W.	HATCH, AZEL F.
BUCHANAN, W. I.	HEAD, FRANKLIN H.
BUCKINGHAM, EBENEZER	JACKSON, HUNTINGTON W.
BURNHAM, DANIEL H.	LEITER, L. Z.
CRAWFORD, ANDREW	McCAGG, E. B.
CURTIS, WILLIAM E.	McCLURG, A. C.
DAVIS, GEORGE R.	McNALLY, ANDREW
FIELD, JOSEPH N.	PATTERSON, ROBERT W.

PEARCE, J. IRVING  
PETERSON, ANDREW  
PULLMAN, GEORGE M.  
PUTNAM, FREDERICK W.  
REAM, NORMAN B.  
SCHNEIDER, GEORGE  
SCOTT, JAMES W.

SMITH, BYRON L.  
SPRAGUE, A. A.  
STOCKTON, JOSEPH  
WALKER, EDWIN  
WALLER, R. A.  
WALSH, JOHN R.  
WILLIAMS, NORMAN

## LIFE MEMBERS.

ADAMS, GEORGE E.  
ALDIS, OWEN F.

BARRETT, MRS. A. D.  
BARRETT, ROBERT L.  
BARTLETT, A. C.  
BLACKSTONE, MRS. TIMOTHY B.  
BLAINE, MRS. EMMONS  
BLAIR, CHAUNCEY J.  
BLAIR, HENRY A.  
BLAIR, WATSON F.  
BOOTH, W. VERNON  
BUTLER, EDWARD B.  
BYLLESBY, H. M.

CARTON, L. A.  
CHALMERS, WILLIAM J.  
CRANE, CHARLES RICHARD  
CRANE, RICHARD T.  
CUMMINGS, D. MARK

DEERING, CHARLES  
DELANO, FREDERIC A.  
DICK, ALBERT BLAKE  
DRAKE, TRACY C.

FARWELL, WALTER  
FAY, C. N.  
FIELD, STANLEY  
FRANTZIUS, FRITZ VON  
FULLER, WILLIAM A.

GARTZ, A. F.  
GRISCOM, CLEMENT A.  
GROMMES, JOHN B.

HAMILL, ERNEST A.  
HILL, LOUIS W.  
HOROWITZ, L. J.  
HOXIE, MRS. JOHN A.  
HUGHITT, MARVIN  
HUTCHINSON, C. L.

ISHAM, MRS. KATHERINE  
PORTER.

JOHNSON, FRANK S.  
JOHNSON, MRS. ELIZABETH AYER  
JONES, ARTHUR B.

KEEP, CHAUNCEY  
KING, FRANCIS  
KING, JAMES C.  
KIRK, WALTER RADCLIFFE

LAWSON, VICTOR F.

MCCORMICK, MRS.  
MCCORMICK, CYRUS H.  
MCCORMICK, HAROLD F.  
MACVEAGH, FRANKLIN  
MASON, WILLIAM S.  
MITCHELL, J. J.

NEWELL, A. B.

ORR, ROBERT M.

PAM, MAX  
PATTEN, HENRY J.  
PIKE, EUGENE S.  
PORTER, GEORGE F.  
PORTER, H. H.

REAM, MRS. CAROLINE P.  
REVELL, ALEX. H.  
ROSENWALD, JULIUS  
RUSSELL, EDMUND A.  
RYERSON, MRS. CARRIE H.  
RYERSON, MARTIN A.

SMITH, ORSON  
SPRAGUE, A. A. 2D.  
STURGES, GEORGE

THORNE, GEORGE R.

WILLARD, ALONZO J.



## ANNUAL MEMBERS.

ADAMS, CYRUS H.  
ADAMS, MILWARD  
ALLERTON, ROBERT H.  
ARMOUR, GEORGE A.

BAILEY, EDWARD P.  
BECKER, A. G.  
BILLINGS, C. K. G.  
BILLINGS, DR. FRANK  
BOAL, CHARLES T.  
BROWN, WILLIAM L.  
BURLEY, CLARENCE A.

COMSTOCK, WILLIAM C.  
COONLEY-WARD, MRS. L. A.  
CUMMINGS, E. A.  
CURTIS, D. H.

DAY, A. M.  
DEERING, JAMES

EISENDRATH, W. N.

FAIR, R. M.  
FORGAN, JAMES B.  
FORSYTH, ROBERT  
FRANK, HENRY L.  
FULLER, O. F.  
FÜRST, CONRAD

GAYLORD, FREDERIC  
GLESSNER, J. J.  
GOODRICH, A. W.  
GORDON, EDWARD K.  
GREY, CHARLES F.  
GURLEY, W. W.

HARRIS, GEORGE B.  
HARRIS, JOHN F.  
HASKELL, FREDERICK T.  
HIBBARD, WILLIAM G., Jr.  
HITCHCOCK, R. M.

HOLT, GEORGE H.  
HOPKINS, JOHN P.

INSULL, SAMUEL

JENKINS, GEORGE H.  
JONES, J. S.

KEEFER, LOUIS  
KEITH, W. SCOTT  
KIMBALL, EUGENE S.  
KIMBALL, MRS. MARK

LAMB, FRANK H.  
LAY, A. TRACY  
LEE, BLEWETT  
LEIGH, EDWARD B.  
LINCOLN, ROBERT T.  
LINN, W. R.  
LOGAN, F. G.  
LORD, J. B.  
LOWDEN, FRANK O.  
LYTTON, HENRY C.

McCREA, W. S.  
McWILLIAMS, LAFAYETTE  
MacFARLAND, HENRY J.  
MAGEE, HENRY W.  
MANSON, WILLIAM  
MANSURE, E. L.  
MAYER, LEVY  
MERRYWEATHER, GEORGE  
MEYER, MRS. M. A.  
MOORE, N. G.  
MULLIKEN, A. H.

NATHAN, ADOLPH  
NOLAN, JOHN H.  
NORTON, O. W.

ORB, JOHN A.  
OSBORN, HENRY A.

PALMER, PERCIVAL B.  
PARKER, FRANCIS W.  
PEARSON, EUGENE H.  
PINKERTON, W. A.  
PORTER, WASHINGTON

RIPLEY, E. P.  
ROSENBAUM, JOSEPH  
ROSENFELD, MRS. MAURICE  
RUNNELLS, J. S.

SCHMIDT, DR. O. L.  
SCHWARTZ, G. A.  
SEIPP, MRS. C.  
SHEDD, JOHN G.  
SHORTALL, JOHN L.  
SKINNER, THE MISSES  
SOPER, JAMES P.  
SOUTHWELL, H. E.

SPENCE, MRS. ELIZABETH E.  
SPOOR, J. A.  
STOCKTON, JOHN T.  
STUART, ROBERT

TEMPLETON, THOMAS

UIHLEIN, EDWARD G.

WACKER, CHARLES H.  
WALKER, JAMES R.  
WALKER, WILLIAM B.  
WALLER, EDWARD C.  
WEBSTER, GEORGE H.  
WHITE, A. STAMFORD  
WHITEHEAD, W. M.  
WILSON, MRS. E. C.  
WILSON, M. H.

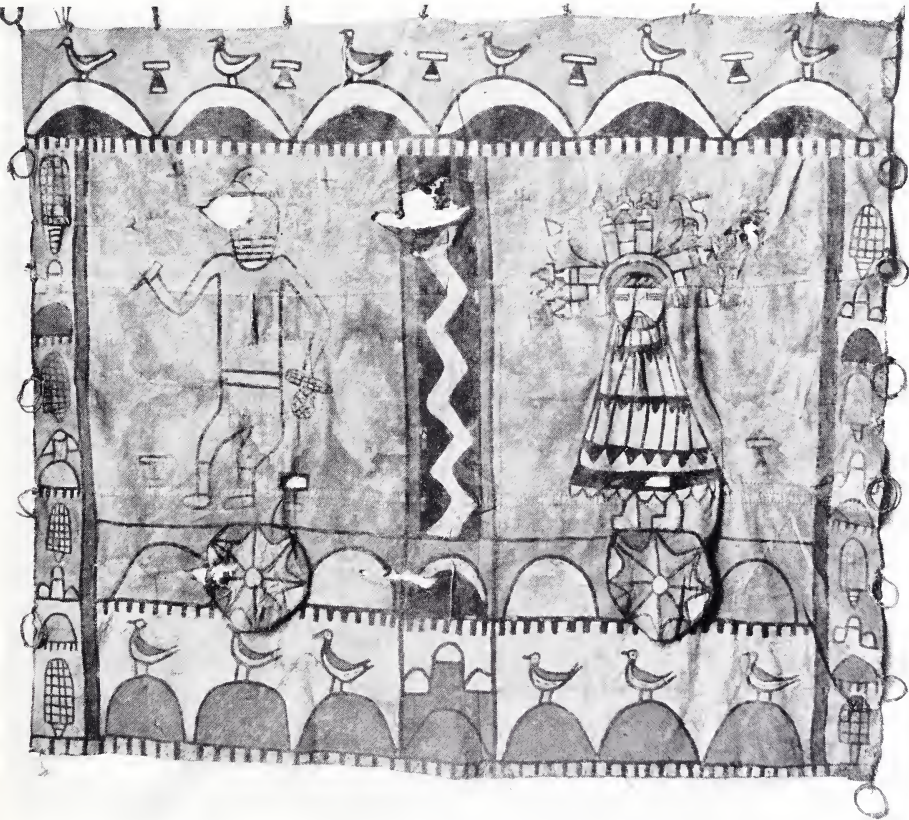
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DECEASED.

CONOVER, CHARLES H.  
CORWITH, CHARLES R.

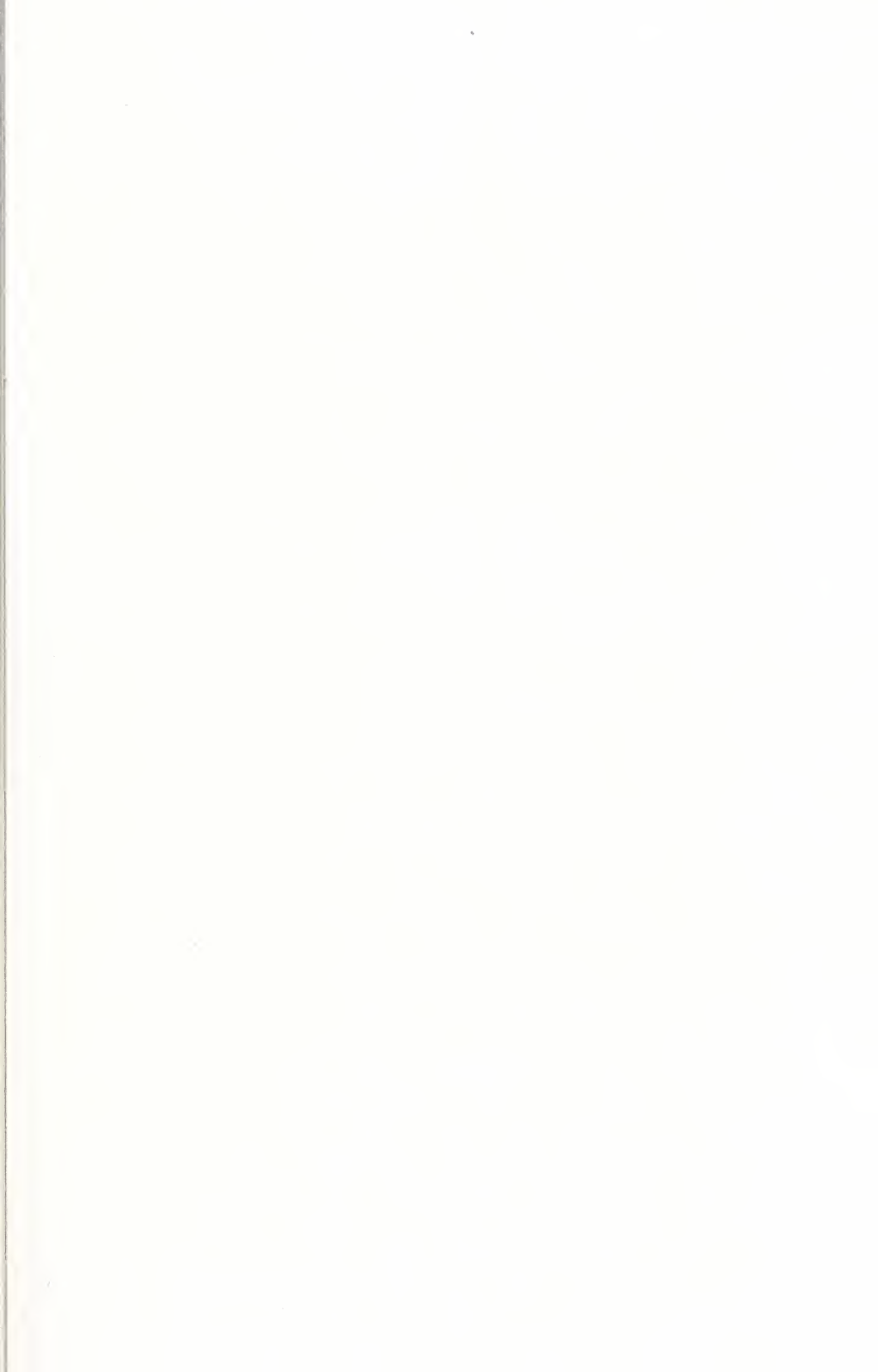
CUDAHY, JOHN  
GREY, WILLIAM L.  
WOODCOCK, LINDSAY T.

35619



OLD HOPI BALULUKON SCREEN WITH PICTORIAL SYMBOLS ON CANVAS.  
Gift of Stanley McCormick.













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